REPÚBLICA DE MOÇAMBIQUE

INSTITUTO NACIONAL DE GESTÃO DO RISCO DE DESATRES

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

FINAL REPORT

PROJECT:P-MZ-AAG-008 CLIMATE INSURANCE FINANCE AND RESILIENCE DEVELOPMENT PROGRAM (CLINFREDEP)

COUNTRY: MOZAMBIQUE

March 2021

EXECUTIVE SUMMARY

Brief project description

The Climate Insurance Finance and Resilient Development Program (CLINFREDEP) will promote the development of climate-resilient infrastructure and agricultural diversification using climate-smart agriculture practices to enhance Climate Resilience for sustained economic growth. The program is also to support the Government national preparedness plan to reduce social vulnerability to drought through adoption of preventive insurance policies and programs.

The CLINFREDEP proposes to reduce the impact of climate events and strengthen the resilience capacity of communities and production systems to better cope with the effects of drought, which are exacerbated by rural poverty, food insecurity, and land degradation.

The specific objectives of the project are: (i) to enhance the country's resilience and response to climate shocks, by consolidating financial protection against climate-related disasters; (ii) to improve climate-resilient infrastructure; and (iii) to promote climate-resilient income-generating activities and strengthen food security and nutrition. This project consists of 4 components, namely:

Components	***Issues***
Component I: Construct/rehabilitate climate resilient infrastructure (UA 14.0 Million) with two sub-components	i) Construct Water Harvesting Infrastructure (UA 9.0 Million) and ***ii)*** Rehabilitate Degraded Infrastructure and landscapes (UA 5.0 Million)
*Co**mponent II:*** Improved Food Security and Marketing to Increase Resilience to Climate Change (UA 9.0 Million) with 3 sub-components	i) the improvement of climate smart agriculture practices (UA2.5 million); improvement of food; ii) Security and nutrition diversification (UA 3.25 million) and iii) Value-Chain and agro-processing (UA 3.25 million).
Component III: This component will promote the Climate Insurance as a valuable option for managing the risks of climate disaster and improve the resilience of the country (UA 6.0) component has two sub-components	(i) developing climate risk management solutions (UA 3.5 million) and (ii) Supporting access to climate risk insurance (UA 2.5 million).
Component IV: The Project Management (UA 2.0 million)	It will include capacity building in climate change management in particular to drought, monitoring and evaluation, financial management and development of a communication strategy and procurement.

Overview of the major environmental risks

The project will be located in 3 three provinces (Maputo, Gaza and Inhambane) and each province will selected three districts to host the project based on the Bank procedures the project was subject to the environmental and social screening process and it was categorized under category 2, due to the expected negative impacts that the implementation of some project activities will bring to the environment and society. Therefore, some minor impacts are expected.

The project will bring more positive impacts than negative impacts at the end, because the targeted communities and farmers will have been provided with climate resilient instruments to cope with the extreme weather conditions. The overall implementation of the project components will boost productivity and thus resulting in additional quantity of goods that can be sold at local markets.

The major environmental risk are related with the implementation of the component 1 (construction activities) namely: soil erosion and contamination due excavation activities and potential of chemical spillages, water contamination misuse of natural water sources vegetation loss due to clearance for establishment of reservoirs, camping sites.

From the social area these are the major risk: health and safety, influx workers and Gender Biased Violence (GBV) related aspects, communicable and emergent (HIV, ITS and COVID 19) disease contamination.

Institutional Framework, Laws and regulation/procedures the project will comply with and Bank safeguards policies requirements

The project will have to comply with Mozambican Environmental Laws and Regulations and African Development Bank Rules and Procedures. The constitution of the Republic of Mozambique lays the ground for what is today the applicable environmental and social legal instruments. It provides that all the citizens have the right to a balanced environment and the duty to protect it[1].

The proposed program must be implemented within National and Bank legal and institutional framework that may be relevant to the project throughout its life cycle. Relevant environmental and social instruments and regulations required are presented in the next subsections. These subsections describe the regulations, major provisions, and its relevance for the project.

Environmental Law (Law No. 20/97)- Establishes the basis for environmental management as a pre-requisite for a country's sustainable development. In terms of scope, this applies to public and private activities directly or indirectly affecting the environment. The project conformity with this provision is critical to contribute to the country's sustainable development.

Regulation for Environmental Impact Assessment - ESIA (Decree No. 54/2015)- It defines the fundamental instruments for environmental management, the ESIA, which aims at mitigating the negative impacts that certain projects, in the public and private sectors, may cause to the natural and socio-economic environment, through the undertaking of environmental studies prior to commencement of the projects. **Public Participation methodologies and procedures (Ministerial Diploma No. 130/2006)**-Defines the basic principles related to public participation, methodologies, and procedures. Considers public participation as an interactive process that initiates at the design stage and continues through the lifetime of the project. It defines that Public Participation Process (PPP) for ESIA must conform with the guidelines provided in this Ministerial Diploma.

Air quality

Regulation for Environmental Standards and Effluent Emission (Decree No. 18/2004 (as amended by Decree No.67/2010) - Establishes parameters for the maintenance of air quality. The project shall comply with the air quality standards, considering the admissible emissions by law, so as not to harm the environment.

Water quality

[1] Article 90

Water user use (Law No. 16/91) –The law provides that any activity with the potential of contaminating or degrading public waters, in particular the discharge of effluent, is subject to a special authorization to be issued by the Regional Water Administration and payment of a fee.

Environmental Quality Standards and Effluent Emissions Decree No. 18/2004 –this defines that when an industrial effluent is discharged into the environment, the final effluent must comply with discharge standards established. The law also incorporates the discharge of domestic effluents.

Land Use and Rights

Land Policy (Resolution No. 10/95) – It sets out that the State must provide the land for an investments and is responsible for land use and physical planning, although plans can be made by the private sector. Land use rights (Law No. 19/1997) – Establishes the rights of land use, including details on customary rights and procedures for acquisition and use of land titles by communities and individuals. The law recognizes and protects the rights acquired through inheritance and occupation (customary rights and duties of good faith), except for legally defined reserves or areas where land has been legally transferred to another person or institution.

Regulation for the Resettlement Process Resulting from Economic Activities (Decree No 31/2012) –Stipulates rules and basic principles for resettlement processes from the implementation of public or private economic activities. Equally, it provides that the Resettlement Plan is part of the ESIA process and that its approval precedes the issuance of the environmental license. This regulation states that if a project results in physical or economic resettlement, a Resettlement Plan needs to be developed as part of the ESIA process and approved.

Cultural Heritage

Cultural Heritage (Law No. 10/88) – This seeks to protect material and non-material assets of the Mozambican cultural heritage. Material cultural assets include monuments, groups of buildings with historic, artistic or scientific importance, places or locations (with archaeological, historic, aesthetic, ethnologic or anthropologic interest) and natural elements (physical and biological formations with particular interest from an aesthetic or scientific point of view). If archaeological objects are found during sub-projects implementation, this law shall apply and the subcontractor shall communicate the finding to the appropriate cultural heritage agency, immediately.

Biodiversity

Biodiversity protection (Law No. 20/97) – Covers aspects of guaranteeing the protection of biological resources, particularly of plant or animal species threatened with extinction or any similar issue, by their genetic value, ecological, cultural, or scientific, require special attention. Protection is extended to their habitats, especially those built in areas of environmental protection.

Labour Safety

The Labour Law (23/2007) is the main statute governing all aspects of the employment relationship. There is also other derivative legislation on various lateral aspects of the employment relationship (e.g., the legal framework on domestic work. It also determines the minimal wages per sector. The country was also established by Law No. 4/2007 of February 7, the legal framework for social protection. This Law defines the foundation that underpins Social Protection and organizes the Social Protection system.

Gender Biased violence

In Mozambique there is no specific legislation on Gender. However, the Ministry of Gender has developed policies and strategic plans to decrease gender-based inequalities within different sectors.

The National Institute of Disaster and Risk reduction management (INGD) prepared its gender strategy 2016-2020.

This strategy did not clearly include the action against gender biased violence, which has been systematically reported in the rescue camps. To develop a comprehensive approach for the GVB during the emergency the strategy is in revision.

INGD, based on this strategy has indicated gender focal points at national level. With the New institute (INGD), gender issues will be included in the newly established Safeguards Gab net The GBV in this project may be expected among vulnerable people specifically women and young girls as the project will require influx workers due to construction activities, At the operation phase women may be excluded from the benefits of the project, just because there are women, therefore equity issues shall be considered at the early stage.

Climate change

Mozambique remains extremely vulnerable to climate variability and change. Droughts, severe flooding, and coastal storms are increasing in frequency and severity. This has affected the country's economic performance. Increased variability of weather and climate patterns could slow and even reverse the progress made on poverty reduction in recent years in Mozambique. While uncertainties remain, it seems likely that climate and weather variability will increase exerting important impacts on the water sector and related livelihoods. The environmental legal framework is overall referred to as the need for balanced development and recognized the vulnerability of Mozambique to Climate Change. In 2010 the country approves the National Climate Change Adaptation and Mitigation Strategy (NCCAMS), which represents a turning point in Mozambique's response to the challenges of climate change, indicating a clear set of strategic actions to be implemented so that Mozambique can ensure a more prosperous, resilient and sustainable future.

The Bank African Development Bank Environmental policies

Operation safeguard are mechanisms by which the AfDB integrates the environmental and social issues into decision making. It supports participatory approaches and transparency. They provide a set of specialized tools to support development processes as follows. The OSs are intended to: Better integrate considerations of environmental and social impacts ; Prevent projects from adversely affecting the environment and local communities or, where prevention is not possible, minimise, mitigate and/or compensate for adverse effects and maximise development benefits; Systematically consider the impact of climate change on the sustainability of investment projects and the contribution of projects to global greenhouse gas emissions; Delineate the roles and responsibilities of the Bank and its borrowers or clients in implementing projects, achieving sustainable outcomes, and promoting local participation; and Assist regional member countries and borrowers/ clients in strengthening their own safeguards systems and their capacity to manage environmental and social risks.

Framework Environmental and Social Management Plan (ESMP)

The project implementation will be resulting in more positive impacts than negatives, due to the nature of the project. Some negative impacts are expected associated with the construction activities under component 1 and 2 The expected positive impacts will be result from:

Increase water availability and quality for human and animal consumption: construction water reservoirs and multifunction borehole will expand the time of water availability for consumption, and will facilitate irrigation for new crops and decrease animal mortality due to few feeding stocks and water during dry season.

Employment creation: Employment opportunities will be created during the construction of project infrastructure.

Capacity building and awareness The project will introduce new technologies and equipment's for farmers. Therefore, is expected the capacity and agriculture services at local level will be improved and strengthened though the provision of material and equipment's. Awareness campaigns and dissemination of best practices will contribute to the vegetation, soil and water conservation.

Mitigation and enhancement measures through an adoption of best practices and implementation of OHS measures. At the level of project, it was prepared this ESMF, which will then have turned into ESMP at subproject level, after the identification of the subprojects. The flowing matrix identifies the environmental and social impacts and mitigation measures proposed for the entire project:

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
Site preparation and in depth survey define the suitable area for construction and drilling	Identification of the necessary requirement	To fulfil the requirements under the Mozambican law	• **Measure 1:** Desk study and initial visits; • • Contract signed • • Paperwork (license for construction); •	Contractor Client Contractor	Study done

Water quality control	Water contamination	To avoid impact on health issues	• A clause requiring the contractor to take all reasonable precautions to prevent spillages and leakage.
			• The contractor shall provide potable water to his workforce during the construction.
			• When possible, the contractor should assist the community, providing water to the more vulnerable people;
			• Apply soil and water conservation measures to minimize spillage and run-off.
			• Cleaning of construction equipment and vehicles shall be carried out in designated service/maintenance areas;
			  • All water and other liquid waste products shall be collected and disposed of at locations on site or off site;
			  • Ensure adequate and regular checks on the equipment in use to ensure they are well maintained to prevent leaking oils and fuels;
			  • Refuelling should be done in safe locations where there is no likelihood of
				Contractor Supervision	Water quality control measure at each borehole need to be in place for human consumption

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			spillages; • Put measures to minimize leaching and chemical run-off.		
Soil conservation and quality	Erosion and soil contamination	To avoid loss of soil	• Unnecessary vehicles and machinery movements should be avoided as much as possible; • Reclaim and re-vegetate excavation sites once work is completed to reduce run off; • Backfilling and compacting excavated areas immediately after excavation to limit exposure of loose soils; • The contractor should avoid running heavy equipment during rainy season; • To avoid erosion around the small dams the contractors should plant grass and trees to cover the soil and decrease the run off; • Constructing retaining walls, in the small dams, to enclose excavated loose soils and ground cuts with steep slopes; • Planting grass and trees on excavated bare land.	Contractor Supervising consultant	A waste management plan of the camp and work sites Toilets with septic tank, Drainage system in place Storm water drainage system established
Air Quality	Noise and dust pollution	To decrease/mitigate level of noise and dust in the air	• All workers working in a very polluted environment shall be provided with protective equipment. • Avoid any excessive nuisance to the community and wildlife due to the operation of machinery during night time;	Contractor Supervising consultant	Measure levels of dust and noise (if possible) Visible and hearing verification; Number of PPE distributed

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			• When operating machinery close to residential area and sensitive areas the Contractor's working hours shall be limited to daylight hours		
	Loss of vegetation		• Where possible, clearing of vegetation, has to be avoided as much as possible; • Where clearing is done, the contractor shall replant, per each tree cutted 3 shall be planted; • Erosion control measures need to be put in place; • avoid clearing and construction within key sensitive habitats.		
Waste management			• Before commencing work, the Contractor will be required to identify potential hazards for each work assignement. • Provisions of emergency responses are to be included in the Contractor 's site safety plan which is to include nomination of a person who will be immediately contacted in case of an accident occur. • Develop a disciplinary policy, for example, progressively (oral, written warning, suspension and dismissal of the worker).		

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			• All workers must sign the Code of Conduct. • The Contractor must have/define its Occupational Health and Safety Policy. • The contractor will be required to keep the site free of drugs and alcohol. • The contractor 's site safety plan will include provision for a safe work environment and provide safety measures, training and protective equipment to all workers including hand, head, eye and ear protection and safety footwear. • All workers shall be provided with PPE (Personal Protective Equipment). • Designing machines to eliminate trap hazards and ensuring that extremities are kept out of harm's way under normal operating conditions. • Turning off, disconnecting, isolating, and de-energizing (Locked Out and Tagged Out) machinery with exposed or guarded moving parts. • All chemical products shall be stored in proper area and shall be marked with warning signals. • Storage of chemicals shall not be accessible		

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			for strangers. • Keeping the number of employees exposed, or likely to become exposed, to a minimum. • When working in high the contractor shall install the guardrails with mid-rails and toe boards at the edge of any fall hazard area. • Proper use of ladders and scaffolds by trained employees. • Appropriate training in use, serviceability, and integrity of the necessary PPE. • Inclusion of rescue and/or recovery plans, and equipment to respond to workers after an arrested fall.		
Occupational Health and safety	Health and social cohesion	To minimize outbreak of infectious diseases and conflicts between workers and the community	• Share the workers required for the project locally (especially unskilled staff); • Mandatory and regular training for workers on required lawful conduct in host community and legal consequences; • Develop more specialized instruments, such as a site-specific Labour Influx Management Plan and/or a Workers' Camp Management Plan; • Allocate the camp site in a remote area; • Set a compulsory Code of Conduct for workers with respective Penalty Policy;	Contractor; Supervising Consultant	Number of condoms distributed;Number of awareness promotion sessions

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			• The contract shall avoid being accused of Children Abuse and Exploitation; • Train local workers within a reasonable timeframe to meet project requirements; • Sensitization campaigns both for workers and local communities; • Establishment of a grievance redress mechanism (GRM) for workers and host community; • Monitoring and supervision, and, as needed, adaptive management actions.		
Gender Biased Violence (GVB)			• The contractor shall develop and implement the project's Codes of Conduct (COC), GBV Action Plan, Grievance Redress Mechanism (GRM) and implement accordingly; • The contractor shall prepare a C-ESMP that includes a detailed GBV Action Plan; • All employees shall attend an induction training course prior to commencing work on site; • All employees should sign the project's 'Individual Code of Conduct' confirming their agreement to comply with ESMP measures; • Establish and operationalize GRM whose approach is sensitive to issues of GBV and SEA; • Information and awareness raising campaigns for community members, specifically women and girls;	Service provider; Contractor/engineer	Number complaints received; Number response given to the victims;

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			• Provision of cultural sensitization training for workers regarding engagement with local community; • Awareness-raising among local community and workers.		

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
Community health	Project interference with community	Avoid community problems	• Information campaigns on STDs among the workers and local community; • Education about the transmission of diseases; • All Contractor, Subcontractor and Engineer Workers must implement social distancing by maintaining a minimum distance 1.5 meters from other worker; • Reduce to minimal the face to face meetings; • Locate campsite away from sensitive sites like villages; • Support health agencies and their response planning to prevent Emerging Infectious Diseases, such as COVID-19, diarrhoea, etc. • Competition over water use due to influx of workers in the area, and due to the construction activity must be minimized. • Neighbouring sensitive land users are informed of unusual events or problems that may affect amenity; • Watering soil/sands on windy days to avoid dust over the population. • Risk of exposure to hazardous products has to be minimized;		

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			• Avoid burning of residual crop and other wastes, which creates harmful air emissions that may adversely impact surrounding communities.		

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
Influx workers and employment			• Provide safety regulations and requirements • Reinforce monitoring mechanisms to ensure that the workers are not committing violence and other type of nuisance within community areas • Provide health safety packages, i.e. condoms and other to prevent the workers to spread sexual related diseases.	Contractor Contractor and community leaders Contractor Contractor	Number of local people employed Number of local women employed Salaries paid Local providers contracted Orders placed with local businesses Local businesses selling to contractor Ablution facilities Skips and garbage bins at site Time table and name of refuse collectors

The Consultation Process

A consultation process is a requirement during the preparation of any safeguard's instruments, this aim to engage local key stakeholders and involve them in the revision of the draft findings of the ESMF. The consultation process of this ESMF, due to COVID 19 pandemic restriction, adopted a mixed strategy. Consultation process during the preparation of the safeguard instrument is a requirement of the Government of Mozambique under the Public consultation Directives and Bank for due diligence as required in the ESIA.

The purpose of consultations was: (i) to generate a good understanding of the project by all stakeholders; (ii) to enhance ownership of the project by local leadership, the community and local farmers; (iii) to understand people's and agency expectations about the project; (iv) to understand and characterise potential environmental, social and economic impacts of the project; (v) to enhance local benefits that may accrue from the project; and (vi) to enable stakeholders involved in the project to provide views, hence participating in or refining project designs. In addition, site-specific investigations were also conducted to gain insight to the likely impacts of the programme on the environment.

The members of the communities in all locations welcomed the project and referred to their main problems. The consultations also allowed the team to capture the communities' concerns and expectations for the identification of the environmental issues and evaluation of the magnitude and significance of the potential impacts of the project, which were discussed earlier.

One of the problems that the communities referred in all location is the water provision, agriculture failure and shortage of inputs (such as seed), from the social perspective unemployment is the major problem.

The successful implementation of this project will depend on the capacity vested at the PIU level to coordinate with the beneficiaries' institutions (INGD, MADER) at the national and provincial levels. Both institution at central level have a safeguard office, with the main objectives are described above. INGD safeguard office is understaffed, INGD still in the structuring of the institution, but from the talk with Arid and Semi-Arid division managers it is expected that the following people be placed at central and local level (delegation) to oversee the environmental and social portfolio of INGD.

Table 1: INGD Safeguard staff needed

	Number of staff to be placed at safeguard cabinet	Skill needed
INGD	5	Social and Environmental expertise, capacity to managed and GRM database
Maputo	3	Environment and social
Gaza	3	Environment and social
Inhambane	3	Environment and social

The staff need to have substantial knowledge of environment, social science with expertise in gender and also be able to manage GRM of the INGD. The Safeguard Office at INGD (central and provincial level), will need to be equipped and capacitated.

The project will assess environmental and social capacity and prepare a training program to strengthen capacity in coordinating, planning, implementing, and monitoring environmental and social issues. For the successful implementation of this ESMP, the capacity building requirements will mostly be in the form of training programs and sensitization workshops for the coordinating team, Environmental Affairs Department and SDPI staff, Contractors, Supervising Engineers, and local communities.

Grievance Mechanism

The project shall implement a grievance redress mechanism to solve conflicts and problems that may arise due the implementation of the project. Conflicts or grievances may arise when the construction process occur without a pre negotiation process or contractor does not respect the concerns of the PAP's.

Conflicts generally arise from poor communication, inadequate or lack of consultation, inadequate flow of accurate information, or restrictions that may be imposed on people through the implementation of Project activities. Grievances Redress Mechanism will be available for the sub-project affected persons to be able to address their issues and to solve prior to use formal legal grievance system. Through this mechanism, AP's will be able to react on any damages occurred during the construction works or ESMF implementation, including aspects related with GBV, CAE and misbehavior of contractor workers.

The Project Authority in terms of grievances is PIU at provincial level. Project Communication Plans should prioritise awareness-raising about the structures that are available to redress more serious grievances that cannot be addressed satisfactorily locally.

At local level community leaders will be trained in communication and initial grievances reception. Grievances response at community level will also be linked to the community court system where these have been duly constituted, so that they can be used for resolving as many grievances as possible at local community level.

A Project Liaison Committee (PLC) will be established per district and members of localities or villages along the road will be representing the communities at PLC. It expected that the community members at local or village community level submit their grievances to be given a solution initial for the local authorities. They may also exact penalties such as compensation for damages caused by the offense and / or, public criticism, community service, small fines, refraining from carrying out the activity that caused the case. Unresolved cases may be turned over to the District Courts.

Item	Monitoring Parameters	Monitoring Frequency	Monitoring Locations	Responsibility
Environmental best practices (farming production, etc.), awareness campaigns; Training and education	• Surveys, field verification, proper use of natural resources, waste management, use of pesticides and fertilizers • Training records; • Sensitization messages; • Bush fire control messages dissemination	Continuous	All sites	PIU in cooperation with Environment authorities
Training and education on infrastructure management and SME's management	• Proper use of facilities • Creation and functioning of new SME's	Continuous	All sites	PIU
Water and soil quality	General quality parameters for soil and water: • pH • Dissolved Oxygen • Total Dissolved Solids • Conductivity • Turbidity • Temperature Oxidation Reduction Potential • Nutrients	One time before starting the project to obtain a general reference situation followed by 2 times each year (dry and rainy season)	For each site, 2 sampling stations: 1 in an area directly influenced by the project and one in a nearby location not affected directly by the activities	PIU in cooperation with DPDTA

Occupational Health	• Number of Condoms distributed • Number of sensitization on HIV/AIDs done (minutes of the meetings); • Presence of Service provider; • No. of sensitization meetings ad records	Monthly	For all contractors and subcontractors in all sites	PIU monitoring and evaluation expert Environmental)
Gender Based Violence (GVB) and GRM (Grievance redress mechanism)	• Presence of service provider • Number of claims received Number of assisted victims • Presence of Workers' Code of Conduct. • GRM records on GBV and SEA • Presence of GBV plan • Employment records showing age	Monthly	For all contractors and subcontractors in all sites	PIU (monitoring and evaluation expert Environmental expert)

Implementation of the ESMP

For the implementation of the ESMP the institutional arrangement proposed for the project implementation be coordinated by INGD. Within INGD the project will be located at the Arid and Semi-Arid Zone Division. The existing Technical Council for Disaster Management (CTGC), which meets three times a year and brings together key line ministries and agencies at ministerial level, will serve as the Project Steering Committee (PSC). The technical council is chaired by the General Director of INGC, who coordinates high level policy and planning on drought and emergency issues. The Steering Committee will provide overall policy implementation directives and will seek to integrate drought and climate change issues into the distinct sectoral interventions made by the Project. The Project will implement all policy guidelines provided by the CTGC. For the implementation of ESMP it will be implemented in liaison with the Safeguards office at INGD.

At provincial level the project will be implemented in liaison with the Disaster management delegation and the project implementation unity. From the environmental perspective the INGD capacity to implement this ESMP is weak in all level, the project must create an institutional arrangement that should be in line with the existing Safeguard Office mandate and build capacity at all level. Regarding environmental and social safeguards, dedicated staff will be hired and allocated to the PIU. INGD staff will work closely with the local safeguard team. Capacity building must be given to the local team to transfer responsibilities in environmental and social management. Financial Management and Audit responsibilities will remain at INGD. For the success of the process, there is a need for efficient coordination between INGD at all level with the PIU staff.

For the implementation of the ESMP the project will allocate resources, the tentative budget for the project was calculated, based on the following cost lines:

- Screening and preparation of the categorization processof the subprojects by the implementing agency;
- Payment of consultants to prepare of ESIA, ESMP, ARAP for subprojects;
- Environmental and social mitigation cost;
- Sensitization and training cost and the cost of environmental monitoring and reporting.
- Institutional capacity building for the coordination team representatives at national and local level on safeguards monitoring;
- Implementation of mitigation measures proposed under the ESIA and ESMP;
- Operation of the GRM. GVB and the resettlement committees;
- Implementation of GBV mitigation measures;
- Environmental licence permits and other permits (Lavra, DUAT etc.)
- Environmental auditing and monitoring process by AQUA/Independent auditor;
- Provision for salaries of the additional staff to be hired by the project;
  Implementation of COVID 19 protocol.

The table below shows the Cost estimates for implementation of ESMP

Itens	Number of subprojects(t 6 districts)	Unity cost		Total cost		source of financing
		Local (1000 MZN)	Cost per subproject (1000 USD)	Local (1000 MZN)	Total(1000 USD)	
Screening by MTA/DPDTA/INGD	6.00	350.00	5.00	2,100.00	30.00	AfDB
Payment of Consultants to prepare of EIA, ESMP, RAP/ARAP for Subprojects	6.00	1,050.00	15.00	6,300.00	90.00	AfDB
Sensization and training cost of environmental monitoring and reporting	20.00	350.00	5.00	7,000.00	100.00	AfDB
Institutional capacity building for safeguards Cabinet		-		5,325.00	75.00	AfDB
Implementation of ESIA and ESMP/RAP/ARAP	6.00	700.00	10.00	4,200.00	60.00	AfDB
Operation of GRM	6.00	210.00	3.00	1,260.00	18.00	AfDB
Environmental premits and other permits	6.00	259.00	3.70	1,554.00	22.20	AfDB
Midterm audit of ES performance	1.00	350.00	5.00	350.00	5.00	AfDB
Completion of ES performance	1.00	350.00	5.00	350.00	5.00	AfDB
Salaries for Env and Social expert to be hired by the PIU	1.00	14,700.00	210.00	14,700.00	210.00	AfDB
Total		-		43,139.00	615.20	AfDB
Rate Usd/MZN 1: 70						

The total estimates for implementing the ESMP is estimated six hundred thousand and fifteen American Dollars (615 000,00). Calculated values are only indicatives, these figures will be adjusted at the subprojects level. The Contractor's costs shall be financed from this budget, on proof of record (e.g. time sheets, material invoices etc.).

In general, it is recommended that the identified impacts and the respective mitigation measures proposed in this Environmental and Social Management Plan shall be an integral part of the specifications for the execution of the work and that their implementation is properly supervised by the project proponent.

RESUME

Brève description du projet

Le programme de financement de l'assurance climatique et de développement résilient (CLINFREDEP) encouragera le développement d'infrastructures résilientes au climat et la diversification agricole en utilisant des pratiques d'agriculture intelligente face au climat pour améliorer la résilience climatique pour une croissance économique soutenue. Le programme vise également à appuyer le plan national de préparation du gouvernement pour réduire la vulnérabilité sociale à la sécheresse grâce à l'adoption de politiques et de programmes d'assurance préventive.

Le CLINFREDEP propose de réduire l'impact des événements climatiques et de renforcer la capacité de résilience des communautés et des systèmes de production pour mieux faire face aux effets de la sécheresse, exacerbés par la pauvreté rurale, l'insécurité alimentaire et la dégradation des terres.

Les objectifs spécifiques du projet sont: (i) renforcer la résilience et la réponse du pays aux chocs climatiques, en consolidant la protection financière contre les catastrophes liées au climat; (ii) améliorer les infrastructures résilientes au climat; et (iii) promouvoir des activités génératrices de revenus résilientes au changement climatique et renforcer la sécurité alimentaire et la nutrition. Ce projet se compose de 4 volets, à savoir:

Composants	***Issues***
Composante I: Construire / réhabiliter une infrastructure résiliente au climat (14,0 millions d'UC) avec deux sous-composantes	(i) Construire une infrastructure de collecte de l'eau (9,0 millions d'UC) et (ii) iv) Réhabiliter les infrastructures et les paysages dégradés (5,0 millions d'UC)
Composante II: Amélioration de la sécurité alimentaire et de la commercialisation pour accroître la résilience au changement climatique (9,0 millions d'UC) avec 3 sous-composantes	(i) l'amélioration des pratiques d'agriculture intelligente face au climat (2,5 millions d'UC); amélioration de la nourriture; (ii) Diversification de la sécurité et de la nutrition (3,25 millions d'UC) et (iii) Chaîne de valeur et agro-industrie (3,25 millions d'UC).
Composante III: Cette composante fera la promotion de l'Assurance Climat en tant qu'option précieuse pour gérer les risques de catastrophe climatique et améliorer la résilience du pays (6,0 UC) La composante comprend deux sous-composantes	(i) le développement de solutions de gestion des risques climatiques (3,5 millions d'UC)) et (ii) (ii) Soutenir l'accès à l'assurance contre les risques climatiques (2,5 millions d'UC).
Composante IV: La gestion du projet (2,0 millions d'UC)	Elle comprendra le renforcement des capacités en matière de gestion du changement climatique en particulier à la sécheresse, le suivi et l'évaluation, la gestion financière et l'élaboration d'une stratégie de communication et de passation des marchés.

Aperçu des principaux risques environnementaux

Le projet sera situé dans 3 trois provinces (Maputo, Gaza et Inhambane) et chaque province sélectionnera trois districts pour accueillir le projet sur la base des procédures de la Banque le projet a été soumis au processus d'examen environnemental et social et il a été classé dans la catégorie 2 , en raison des impacts négatifs attendus que la mise en œuvre de certaines activités du projet entraînera sur l'environnement et la société. Par conséquent, certains impacts mineurs sont attendus.

Le projet aura des impacts plus positifs que des impacts négatifs à la fin, car les communautés et les agriculteurs ciblés auront été dotés d'instruments résilients au climat pour faire face aux conditions météorologiques extrêmes. La mise en œuvre globale des composantes du projet augmentera la productivité et se traduira ainsi par une quantité supplémentaire de marchandises pouvant être vendues sur les marchés locaux.

Les risques environnementaux majeurs sont liés à la mise en œuvre de la composante 1 (activités de construction) à savoir: érosion et contamination des sols dues aux activités d'excavation et potentiel de déversements chimiques, contamination de l'eau mauvaise utilisation des sources d'eau naturelles perte de végétation due au déblaiement pour l'établissement de réservoirs, camping des sites. Du point de vue social, il s'agit du risque majeur: santé et sécurité, afflux de travailleurs et aspects liés à la violence sexiste (VBG), contamination par les maladies transmissibles et émergentes (VIH, STI et COVID 19).

Cadre institutionnel, lois et règlements / procédures auxquels le projet se conformera et exigences des politiques de sauvegarde de la Banque

Le projet devra se conformer aux lois et réglementations environnementales du Mozambique et aux règles et procédures de la Banque africaine de développement. La constitution de la République du Mozambique jette les bases de ce qui est aujourd'hui les instruments juridiques environnementaux et sociaux applicables. Il prévoit que tous les citoyens ont droit à un environnement équilibré et le devoir de le protéger.

Le programme proposé doit être mis en œuvre dans le cadre juridique et institutionnel national et de la Banque qui peut être pertinent pour le projet tout au long de son cycle de vie. Les instruments et réglementations environnementaux et sociaux pertinents requis sont présentés dans les sous-sections suivantes. Ces sous-sections décrivent les règlements, les principales dispositions et leur pertinence pour le projet.

Loi sur l'environnement (loi n ° 20/97) - Établit les bases de la gestion de l'environnement en tant que condition préalable au développement durable d'un pays. En termes de champ d'application, cela s'applique aux activités publiques et privées affectant directement ou indirectement l'environnement. La conformité du projet à cette disposition est essentielle pour contribuer au développement durable du pays.

Règlement pour l'étude d'impact sur l'environnement - EIES (décret n ° 54/2015) - Il définit les instruments fondamentaux de gestion environnementale, l'EIES, qui vise à atténuer les impacts négatifs que certains projets, dans les secteurs public et privé, peuvent environnement naturel et socio-économique, grâce à la réalisation d'études environnementales avant le démarrage des projets.

Méthodologies et procédures de participation du public (Diplôme ministériel n ° 130/2006) - Définit les principes de base relatifs à la participation du public, les méthodologies et les procédures. Considère la participation du public comme un processus interactif qui démarre au stade de la conception et se poursuit tout au long de la vie du projet. Il définit que le processus de participation publique (PPP) pour l'EIES doit être conforme aux lignes directrices fournies dans ce diplôme ministériel.

Qualité de l'air

Règlement sur les normes environnementales et les émissions d'effluents (décret n ° 18/2004 (tel que modifié par le décret n ° 67/2010) - Établit des paramètres pour le maintien de la qualité de l'air. Le projet doit être conforme aux normes de qualité de l'air, compte tenu des émissions admissibles par loi, afin de ne pas nuire à l'environnement.

La qualité d'eau

Utilisation de l'eau par les usagers (loi n ° 16/91) - La loi prévoit que toute activité susceptible de contaminer ou de dégrader les eaux publiques, en particulier le rejet d'effluents, est soumise à une autorisation spéciale à délivrer par l'Administration régionale de l'eau et paiement d'une redevance.

Décret n ° 18/2004 sur les normes de qualité environnementale et les émissions d'effluents - il définit que lorsqu'un effluent industriel est rejeté dans l'environnement, l'effluent final doit être conforme aux normes de rejet établies. La loi intègre également le rejet des effluents domestiques.

Utilisation des terres et droits

Politique foncière (Résolution n ° 10/95) - Elle stipule que l'État doit fournir le terrain pour un investissement et est responsable de l'utilisation des terres et de l'aménagement du territoire, bien que les plans puissent être élaborés par le secteur privé. Droits d'utilisation des terres (loi n ° 19/1997) - Établit les droits d'utilisation des terres, y compris des détails sur les droits coutumiers et les procédures d'acquisition et d'utilisation des titres fonciers par les communautés et les individus. La loi reconnaît et protège les droits acquis par héritage et occupation (droits coutumiers et devoirs de bonne foi), sauf pour les réserves légalement définies ou les zones où la terre a été légalement transférée à une autre personne ou institution.

Règlement sur le processus de réinstallation résultant d'activités économiques (décret n ° 31/2012) - Fixe les règles et principes de base pour les processus de réinstallation résultant de la mise en œuvre d'activités économiques publiques ou privées. De même, il prévoit que le plan de réinstallation fait partie du processus d'EIES et que son approbation précède la délivrance du permis environnemental. Ce règlement stipule que si un projet aboutit à une réinstallation physique ou économique, un plan de réinstallation doit être élaboré dans le cadre du processus d'EIES et approuvé.

Héritage culturel

Patrimoine culturel (loi n ° 10/88) - Elle vise à protéger les biens matériels et immatériels du patrimoine culturel mozambicain. Les biens culturels matériels comprennent les monuments, les groupes de bâtiments ayant une importance historique, artistique ou scientifique, les lieux ou lieux (présentant un intérêt archéologique, historique, esthétique, ethnologique ou anthropologique) et les éléments naturels (formations physiques et biologiques présentant un intérêt particulier d'un point de vue esthétique ou scientifique de vue). Si des objets archéologiques sont découverts lors de la mise en œuvre des sous-projets, cette loi s'applique et le sous-traitant communique immédiatement la découverte à l'agence du patrimoine culturel appropriée.

Biodiversité

Protection de la biodiversité (Loi n ° 20/97) - Couvre les aspects de la garantie de la protection des ressources biologiques, en particulier des espèces végétales ou animales menacées d'extinction ou toute question similaire, par leur valeur génétique, écologique, culturelle ou scientifique, nécessitent une attention particulière. La protection est

étendue à leurs habitats, en particulier ceux construits dans les zones de protection de l'environnement.

Sécurité du travail

La loi sur le travail (23/2007) est la principale loi régissant tous les aspects de la relation de travail. Il existe également d'autres lois dérivées sur divers aspects latéraux de la relation de travail (par exemple, le cadre juridique du travail domestique. Il détermine également les salaires minimaux par secteur. Le pays a également été créé par la loi n ° 4/2007 du 7 février. cadre juridique de la protection sociale Cette loi définit le fondement de la protection sociale et organise le système de protection sociale.

Violence sexiste

Au Mozambique, il n'y a pas de législation spécifique sur le genre. Cependant, le ministère du Genre a élaboré des politiques et des plans stratégiques pour réduire les inégalités fondées sur le sexe dans différents secteurs. L'Institut national de gestion de la réduction des catastrophes et des risques (INGD) a préparé sa stratégie genre 2016-2020. Cette stratégie n'incluait pas clairement l'action contre la violence sexiste, qui a été systématiquement signalée dans les camps de secours. Afin de développer une approche globale pour le GVB pendant l'urgence, la stratégie est en cours de révision.

INGD, sur la base de cette stratégie, a désigné des points focaux pour le genre au niveau national. Avec le Nouvel institut (INGD), les questions de genre seront incluses dans le nouveau Safeguards Gab net La VBG dans ce projet peut être attendue parmi les personnes vulnérables, en particulier les femmes et les jeunes filles, car le projet nécessitera un afflux de travailleurs en raison des activités de construction. les femmes en phase d'exploitation peuvent être exclues des avantages du projet, simplement parce qu'il y a des femmes, c'est pourquoi les questions d'équité doivent être examinées dès le début.

Changement climatique

Le Mozambique reste extrêmement vulnérable à la variabilité et au changement climatiques. Les sécheresses, les inondations graves et les tempêtes côtières augmentent en fréquence et en gravité. Cela a affecté les performances économiques du pays. Une variabilité accrue des conditions météorologiques et climatiques pourrait ralentir et même inverser les progrès réalisés en matière de réduction de la pauvreté ces dernières années au Mozambique. Bien que des incertitudes demeurent, il semble probable que la variabilité climatique et météorologique augmentera, exerçant des impacts importants sur le secteur de l'eau et les moyens de subsistance associés. Le cadre juridique environnemental est globalement appelé la nécessité d'un développement équilibré et reconnaît la vulnérabilité du Mozambique au changement climatique. En 2010, le pays approuve la Stratégie nationale d'adaptation et d'atténuation du changement climatique (NCCAMS), qui représente un tournant dans la réponse du Mozambique aux défis du changement climatique, indiquant un ensemble clair d'actions stratégiques à mettre en œuvre afin que le Mozambique puisse assurer une , un avenir résilient et durable.

Politiques environnementales de la Banque Africaine de Développement

Les opérations de sauvegarde sont des mécanismes par lesquels la BAD intègre les questions environnementales et sociales dans la prise de décision. Il soutient les approches participatives et la transparence. Ils fournissent un ensemble d'outils spécialisés pour soutenir les processus de développement comme suit. Les OS visent à: Mieux intégrer les considérations d'impacts environnementaux et sociaux; Empêcher les projets de nuire à l'environnement et aux communautés locales ou, lorsque la prévention n'est pas possible, minimiser, atténuer et / ou compenser les effets négatifs et maximiser les avantages du développement; Considérer systématiquement l'impact du changement climatique sur la durabilité des projets d'investissement et la contribution des projets aux émissions mondiales de gaz à effet de serre; Délimiter les rôles et responsabilités de la Banque et de ses emprunteurs ou clients dans la mise en

œuvre des projets, l'obtention de résultats durables et la promotion de la participation locale; et Aider les pays membres régionaux et les emprunteurs / clients à renforcer leurs propres systèmes de garanties et leur capacité à gérer les risques environnementaux et sociaux.

Plan-cadre de gestion environnementale et sociale (PGES)

La mise en œuvre du projet aura des impacts plus positifs que négatifs, en raison de la nature du projet. Certains impacts négatifs sont attendus associés aux activités de construction des composantes 1 et 2 Les impacts positifs attendus résulteront de:

Augmenter la disponibilité et la qualité de l'eau pour la consommation humaine et animale: la construction de réservoirs d'eau et de forage multifonction prolongera la durée de disponibilité de l'eau pour la consommation, facilitera l'irrigation pour de nouvelles cultures et réduira la mortalité animale en raison du peu de stocks de nourriture et d'eau pendant la saison sèche.

Création d'emplois: des opportunités d'emploi seront créées lors de la construction des infrastructures du projet.

Renforcement des capacités et sensibilisation Le projet introduira de nouvelles technologies et de nouveaux équipements pour les agriculteurs. Par conséquent, la capacité et les services agricoles au niveau local devraient être améliorés et renforcés grâce à la fourniture de matériel et d'équipements. Les campagnes de sensibilisation et la diffusion des meilleures pratiques contribueront à la conservation de la végétation, des sols et de l'eau.

Mesures d'atténuation et d'amélioration par l'adoption des meilleures pratiques et la mise en œuvre de mesures de SST. Au niveau du projet, il a été préparé ce CGES, qui sera ensuite transformé en PGES au niveau des sous-projets, après l'identification des sous-projets. La matrice fluide identifie les impacts environnementaux et sociaux et les mesures d'atténuation proposées pour l'ensemble du projet:

Plan de gestion environnementale et sociale					
Impacts environnementaux et sociaux	**Enjeux**	**objectifs**	**d'amélioration / d'atténuation**	**responsabilité**	**Indicateurs**
Phase de pré-construction et de construction					
La préparation du site et l'étude approfondie définissent la zone appropriée pour la construction et le forage.		Pour répondre aux exigences de la loi mozambicaine	La préparation du site et l'étude approfondie définissent la zone appropriée pour la construction et le forage.	Entrepreneur Client Prestataire	Etude terminée• Mesure 1: étude documentaire et visites initiales; Contrat signé Documents (permis de construction);
Contrôle de la qualité de l'eau	Contamination de l'eau	Pour éviter tout impact sur la santé	Une clause obligeant l'entrepreneur à prendre toutes les précautions raisonnables pour éviter les déversements et les fuites. • L'entrepreneur doit fournir de l'eau potable à sa main-d'œuvre pendant la construction. • Lorsque cela est possible, l'entrepreneur doit aider la communauté en fournissant de l'eau aux personnes les plus vulnérables; • Appliquer des mesures de conservation du sol et de l'eau pour minimiser les déversements et le ruissellement. • Le nettoyage de l'équipement de construction et des véhicules doit être effectué dans des zones de service / d'entretien désignées; • Toutes les eaux et autres déchets liquides doivent être collectés et éliminés sur place ou hors site;	Prestataire Surveillance	Des mesures de contrôle de la qualité de l'eau à chaque forage doivent être en place pour la consommation humaine

Plan de gestion environnementale et sociale					
Impacts environnementaux et sociaux	**Enjeux**	**objectifs**	**d'amélioration / d'atténuation**	**responsabilité**	**Indicateurs**
Phase de pré-construction et de construction					
			• Assurer des contrôles adéquats et réguliers sur les équipements utilisés pour s'assurer qu'ils sont bien entretenus afin d'éviter les fuites d'huiles et de carburants; • Le ravitaillement en carburant doit être effectué dans des endroits sûrs où il n'y a pas de risque de déversement; • Prendre des mesures pour minimiser le lessivage et le ruissellement de produits chimiques.		
Conservation et qualité des sols	Érosion et contamination des sols	Pour éviter la perte de sol	• Contamination de l'eau Pour éviter tout impact sur la santé • Une clause obligeant l'entrepreneur à prendre toutes les précautions raisonnables pour éviter les déversements et les fuites. • L'entrepreneur doit fournir de l'eau potable à sa main-d'œuvre pendant la construction. • Lorsque cela est possible, l'entrepreneur doit aider la communauté en fournissant de l'eau aux personnes les plus vulnérables; • Appliquer des mesures de conservation du sol et de l'eau pour • déversements et le ruissellement. • Le nettoyage de l'équipement de construction et des véhicules doit être effectué dans des zones de service /	Superviseur des entrepreneurs	Un plan de gestion des déchets du camp et des chantiers Toilettes avec fosse septique, Système de drainage en place Système de drainage des eaux pluviales mis en place

Plan de gestion environnementale et sociale					
Impacts environnementaux et sociaux	**Enjeux**	**objectifs**	**d'amélioration / d'atténuation**	**responsabilité**	**Indicateurs**
Phase de pré-construction et de construction					
			d'entretien désignées; • Toutes les eaux et autres déchets liquides doivent être collectés et éliminés sur place ou hors site; • Assurer des contrôles adéquats et réguliers des équipements utilisés pour s'assurer qu'ils sont bien entretenus afin d'éviter les fuites d'huiles et de carburants; • Le ravitaillement en carburant doit être effectué dans des endroits sûrs où il n'y a pas de risque de déversement; • Prendre des mesures pour minimiser le lessivage et le ruissellement de produits chimiques. • Prestataire • Supervision Des mesures de contrôle de la qualité de l'eau à chaque forage doivent être en place pour la consommation humaine		
Qualité de l'air	Pollution par le bruit et la poussière	Pour diminuer / atténuer le niveau de bruit et de poussière dans l'air	• Tous les travailleurs travaillant dans un environnement très pollué doivent être équipés d'un équipement de protection. • Éviter toute nuisance excessive pour la communauté et la faune due au fonctionnement de la machinerie pendant la nuit; • Lors de l'utilisation de machines à proximité de zones résidentielles et de zones sensibles,	Consultant superviseur	Mesurer les niveaux de poussière et de bruit (si possible) Vérification visuelle et auditive; Nombre d'EPI distribués

Plan de gestion environnementale et sociale					
Impacts environnementaux et sociaux	**Enjeux**	**objectifs**	**d'amélioration / d'atténuation**	**responsabilité**	**Indicateurs**
Phase de pré-construction et de construction					
			les heures de travail de l'entrepreneur seront limitées aux heures de clarté.		
	Perte de végétation		• Dans la mesure du possible, le défrichage de la végétation doit être évité autant que possible; • Lorsque le défrichage est effectué, l'entrepreneur doit replanter, pour chaque arbre coupé, 3 doivent être plantés; • Des mesures de contrôle de l'érosion doivent être mises en place; • éviter le défrichage et la construction dans les habitats sensibles clés.	Consultant superviseur	
Gestion des déchets			• Avant de commencer les travaux, l'entrepreneur devra identifier les dangers potentiels pour chaque affectation de travail. • Les dispositions relatives aux interventions d'urgence doivent être incluses dans le plan de sécurité du site de l'entrepreneur qui doit inclure la nomination d'une personne qui sera immédiatement contactée en cas d'accident. • Développer une politique disciplinaire, par exemple, progressivement (avertissement oral, écrit, suspension et licenciement du		

Plan de gestion environnementale et sociale					
Impacts environnementaux et sociaux	**Enjeux**	**objectifs**	**d'amélioration / d'atténuation**	**responsabilité**	**Indicateurs**
Phase de pré-construction et de construction					
			travailleur). • Tous les travailleurs doivent signer le code de conduite. • L'entrepreneur doit avoir / définir sa politique de santé et sécurité au travail. • L'entrepreneur sera tenu de garder le site exempt de drogues et d'alcool. • Le plan de sécurité du site de l'entrepreneur comprendra des dispositions pour un environnement de travail sûr et fournira des mesures de sécurité, une formation et un équipement de protection à tous les travailleurs, y compris une protection des mains, de la tête, des yeux et des oreilles et des chaussures de sécurité. • Tous les travailleurs doivent être équipés d'EPI (équipement de protection individuelle). • Concevoir des machines pour éliminer les risques liés aux pièges et veiller à ce que les extrémités soient maintenues hors de danger dans des conditions de fonctionnement normales. • Éteindre, déconnecter, isoler et mettre hors tension les machines (verrouillées et étiquetées) dont les pièces mobiles sont exposées ou protégées.		

Plan de gestion environnementale et sociale					
Impacts environnementaux et sociaux	**Enjeux**	**objectifs**	**d'amélioration / d'atténuation**	**responsabilité**	**Indicateurs**
Phase de pré-construction et de construction					
			• Tous les produits chimiques doivent être stockés dans un endroit approprié et doivent être marqués avec des signaux d'avertissement. • Le stockage des produits chimiques ne doit pas être accessible aux étrangers. • Réduire au minimum le nombre d'employés exposés ou susceptibles de l'être. • Lors de travaux en hauteur, l'entrepreneur doit installer les garde-corps avec des rails médians et des plinthes au bord de toute zone de risque de chute. • Utilisation appropriée des échelles et des échafaudages par des employés formés. • Formation appropriée à l'utilisation, à la facilité d'entretien et à l'intégrité de l'EPI nécessaire. • Inclusion de plans de sauvetage et / ou de récupération, et de l'équipement pour répondre aux travailleurs après une chute arrêtée. • pour les étrangers. • Réduire au minimum le nombre d'employés exposés ou susceptibles de l'être. • Lors de travaux en hauteur, l'entrepreneur doit installer les garde-corps avec des rails médians et des plinthes au bord de toute		

Plan de gestion environnementale et sociale					
Impacts environnementaux et sociaux	**Enjeux**	**objectifs**	**d'amélioration / d'atténuation**	**responsabilité**	**Indicateurs**
Phase de pré-construction et de construction					
			zone de risque de chute. • Utilisation appropriée des échelles et des échafaudages par des employés formés. • Formation appropriée à l'utilisation, à la facilité d'entretien et à l'intégrité de l'EPI nécessaire. • Inclusion de plans de sauvetage et / ou de récupération, et d'équipement pour répondre aux travailleurs après une chute arrêtée.		
La santé et la sécurité au travail	Santé et cohésion sociale	Pour minimiser les épidémies de maladies infectieuses et les conflits entre les travailleurs et la communauté	• Partager localement les travailleurs nécessaires au projet (en particulier le personnel non qualifié); • Formation obligatoire et régulière des travailleurs sur la conduite légale requise dans la communauté d'accueil et les conséquences juridiques; • Développer des instruments plus spécialisés, tels qu'un plan de gestion de l'afflux de main-d'œuvre spécifique au site et / ou un plan de gestion des camps de travailleurs; • Attribuer le camping dans une région éloignée; • Établir un code de conduite obligatoire pour les travailleurs avec une politique de pénalité respective; • Le contrat doit éviter d'être accusé d'abus et	Prestataire; Consultant superviseur	Nombre de préservatifs distribués; Nombre de sessions de sensibilisation

Plan de gestion environnementale et sociale					
Impacts environnementaux et sociaux	**Enjeux**	**objectifs**	**d'amélioration / d'atténuation**	**responsabilité**	**Indicateurs**
Phase de pré-construction et de construction					
			d'exploitation d'enfants; • Former les travailleurs locaux dans un délai raisonnable pour répondre aux exigences du projet; • Campagnes de sensibilisation à la fois pour les travailleurs et les communautés locales; • Mise en place d'un mécanisme de règlement des plaintes (GRM) pour les travailleurs et la communauté d'accueil; • Suivi et supervision et, au besoin, actions de gestion adaptative		
Violence sexiste (GVB)			• Le contractant élaborera et mettra en œuvre les codes de conduite (COC) du projet, le plan d'action contre la VBG, le mécanisme de règlement des plaintes (GRM) et les appliquera en conséquence; • Le contractant doit préparer un C-ESMP qui comprend un plan d'action détaillé contre la VBG; • Tous les employés doivent suivre un cours de formation initiale avant de commencer à travailler sur le site; • Tous les employés doivent signer le «Code de conduite individuel» du projet confirmant leur acceptation de se conformer aux mesures du PGES; • Établir et opérationnaliser le GRM dont	Fournisseur de services; Entrepreneur / ingénieur	Nombre de plaintes reçues; Nombre de réponses données aux victimes;

Plan de gestion environnementale et sociale					
Impacts environnementaux et sociaux	**Enjeux**	**objectifs**	**d'amélioration / d'atténuation**	**responsabilité**	**Indicateurs**
Phase de pré-construction et de construction					
			l'approche est sensible aux questions de VBG et d'EES; • Campagnes d'information et de sensibilisation pour les membres de la communauté, en particulier les femmes et les filles; • Fourniture d'une formation de sensibilisation culturelle pour les travailleurs concernant l'engagement avec la communauté locale; • Sensibilisation de la communauté locale et des travailleurs.		

Plan de gestion environnementale et sociale					
Impacts environnementaux et sociaux	**Enjeux**	**objectifs**	**d'amélioration / d'atténuation**	**responsabilité**	**Indicateurs**
Phase de pré-construction et de construction					
Santé communautaire	Interférence du projet avec la communauté	Éviter les problèmes communautaires	• Campagnes d'information sur les MST auprès des travailleurs et de la communauté locale; • Éducation sur la transmission des maladies; • Tous les travailleurs de l'entrepreneur, du sous-traitant et de l'ingénieur doivent mettre en œuvre la distanciation sociale en maintenant une distance minimale de 1,5 mètre des autres travailleurs; • Réduire au minimum les réunions en face à face; • Localiser le camping loin des sites sensibles comme les villages; • Soutenir les agences de santé et leur planification de réponse pour prévenir les maladies infectieuses émergentes, telles que le COVID-19, la diarrhée, etc. • La concurrence sur l'utilisation de l'eau due à l'afflux de travailleurs dans la zone et à l'activité de construction doit être minimisée. • Les utilisateurs des terres sensibles voisins sont informés des événements inhabituels ou des problèmes susceptibles d'affecter les aménités; • Arroser le sol / les sables les jours de vent pour éviter la poussière sur la population. • Le risque d'exposition à des produits dangereux doit être minimisé;		

Plan de gestion environnementale et sociale					
Impacts environnementaux et sociaux	**Enjeux**	**objectifs**	**d'amélioration / d'atténuation**	**responsabilité**	**Indicateurs**
Phase de pré-construction et de construction					
			• Évitez de brûler les résidus de récolte et autres déchets, ce qui crée des émissions atmosphériques nocives qui peuvent avoir un impact négatif sur les communautés environnantes.		

Plan de gestion environnementale et sociale					
Impacts environnementaux et sociaux	**Enjeux**	**objectifs**	**d'amélioration / d'atténuation**	**responsabilité**	**Indicateurs**
Phase de pré-construction et de construction					
Travailleurs afflux et emploi			• Fournir des règlements et des exigences de sécurité • Renforcer les mécanismes de suivi pour s'assurer que les travailleurs ne commettent pas de violence et d'autres types de nuisance dans les zones communautaires • Fournir des paquets de sécurité sanitaire, c'est-à-dire des préservatifs et autres pour empêcher les travailleurs de propager des maladies liées à la sexualité.	Prestataire Entrepreneur et leaders communautaires Prestataire Prestataire	Nombre de personnes employées sur place Nombre de femmes locales employées Salaires payés Fournisseurs locaux sous contrat Commandes passées auprès des entreprises locales Entreprises locales vendant à l'entrepreneur Installations d'ablution Bennes et poubelles sur le site Horaire et nom des collecteurs de déchets

Le processus de consultation

Un processus de consultation est une exigence lors de la préparation de tout instrument de sauvegarde, il vise à impliquer les principales parties prenantes locales et à les impliquer dans la révision du projet de conclusions du CGES. Le processus de consultation de ce CGES, en raison de la restriction de la pandémie COVID 19, a adopté une stratégie mixte. Le processus de consultation pendant la préparation de l'instrument de sauvegarde est une exigence du gouvernement du Mozambique en vertu des directives de consultation publique et de la Banque en matière de diligence raisonnable comme l'exige l'EIES.

Le but des consultations était: (i) de générer une bonne compréhension du projet par toutes les parties prenantes; (ii) renforcer l'appropriation du projet par les dirigeants locaux, la communauté et les agriculteurs locaux; (iii) comprendre les attentes des personnes et des agences à l'égard du projet; (iv) comprendre et caractériser les impacts environnementaux, sociaux et économiques potentiels du projet; (v) améliorer les avantages locaux pouvant découler du projet; et (vi) permettre aux parties prenantes impliquées dans le projet de fournir des points de vue, participant ou affinant ainsi la conception du projet. En outre, des enquêtes spécifiques au site ont également été menées pour mieux comprendre les impacts probables du programme sur l'environnement.

Les membres des communautés de tous les lieux ont accueilli favorablement le projet et ont évoqué leurs principaux problèmes. Les consultations ont également permis à l'équipe de saisir les préoccupations et les attentes des communautés concernant l'identification des problèmes environnementaux et l'évaluation de l'ampleur et de l'importance des impacts potentiels du projet, dont il a été question précédemment.

L'un des problèmes auxquels les communautés ont fait référence partout est l'approvisionnement en eau, l'échec de l'agriculture et la pénurie d'intrants (tels que les semences), du point de vue social, le chômage est le problème majeur.

La réussite de la mise en œuvre de ce projet dépendra de la capacité conférée au niveau de la CEP à se coordonner avec les institutions des bénéficiaires (INGD, MADER) aux niveaux national et provincial. Les deux institutions au niveau central ont un bureau de sauvegarde, dont les principaux objectifs sont décrits ci-dessus. Le bureau de sauvegarde d'INGD manque de personnel, INGD toujours dans la structuration de l'institution, mais d'après l'entretien avec les responsables des divisions Arides et Semi-Arides, il est prévu que les personnes suivantes soient placées au niveau central et local (délégation) pour superviser l'environnement et le social. portefeuille d'INGD.

Tableau 7: Personnel INGD Safeguard nécessaire

	Nombre d'employés à placer dans l'armoire de sauvegarde	**Compétences requises**
INGD	5	Expertise sociale et environnementale, capacité de gestion et base de données GRM
Maputo	3	Environnement et social
Gaza	3	Environnement et social
Inhambane	3	Environnement et social

Le personnel doit avoir une connaissance approfondie de l'environnement, des sciences sociales avec une expertise en genre et être également capable de gérer le GRM de l'INGD. Le bureau de sauvegarde de l'INGD (niveau central et provincial) devra être équipé et doté de capacités.

Le projet évaluera les capacités environnementales et sociales et préparera un programme de formation pour renforcer les capacités de coordination, de planification, de mise en œuvre et de suivi des questions environnementales et sociales. Pour la mise en œuvre réussie de ce PGES, les exigences de renforcement des capacités se présenteront principalement sous la forme de programmes de formation et d'ateliers de sensibilisation pour l'équipe de coordination, le Département des affaires environnementales et le personnel de SDPI, les entrepreneurs, les ingénieurs de supervision et les communautés locales.

Mécanisme de règlement des griefs

Le projet mettra en œuvre un mécanisme de règlement des griefs pour résoudre les conflits et les problèmes pouvant survenir en raison de la mise en œuvre du projet. Des conflits ou des griefs peuvent survenir lorsque le processus de construction se déroule sans processus de pré-négociation ou lorsque l'entrepreneur ne respecte pas les préoccupations des PAP.

Les conflits résultent généralement d'une mauvaise communication, d'une consultation inadéquate ou insuffisante, d'un flux inadéquat d'informations précises ou de restrictions qui peuvent être imposées aux personnes lors de la mise en œuvre des activités du projet. Un mécanisme de règlement des griefs sera disponible pour que les personnes affectées par le sous-projet soient en mesure de résoudre leurs problèmes et de les résoudre avant d'utiliser le système juridique officiel de règlement des griefs. Grâce à ce mécanisme, les AP seront en mesure de réagir à tout dommage survenu pendant les travaux de construction ou la mise en œuvre du CGES, y compris les aspects liés à la VBG, au CAE et au comportement inapproprié des travailleurs de l'entreprise.

Le responsable du projet en termes de griefs est la CEP au niveau provincial. Les plans de communication du projet devraient donner la priorité à la sensibilisation aux structures disponibles pour remédier aux griefs plus graves qui ne peuvent être traités de manière satisfaisante au niveau local.

Au niveau local, les leaders communautaires seront formés à la communication et à la réception initiale des doléances. La réponse aux réclamations au niveau communautaire sera également liée au système des tribunaux communautaires où ceux-ci ont été dûment constitués, afin qu'ils puissent être utilisés pour résoudre autant de réclamations que possible au niveau de la communauté locale.

Un Comité de Liaison du Projet (CLP) sera établi par district et les membres des localités ou villages le long de la route représenteront les communautés au PLC. Il s'attendait à ce que les membres de la communauté au niveau local ou villageois soumettent leurs doléances pour obtenir une solution initiale aux autorités locales. Ils peuvent également imposer des sanctions telles que l'indemnisation des dommages causés par l'infraction et / ou, la critique publique, le travail d'intérêt général, de petites amendes, le refus d'exercer l'activité qui a causé le cas. Les affaires non résolues peuvent être renvoyées aux tribunaux de district.

Élément	Paramètres de surveillance	Surveillance de la fréquence	Des emplacements de surveillance	Responsabilité
Bonnes pratiques environnementales (production agricole, etc.), campagnes de sensibilisation; Formation et éducation	• Enquêtes, vérification sur le terrain, utilisation correcte des ressources naturelles, gestion des déchets, utilisation de pesticides et d'engrais • Dossiers de formation; • Messages de sensibilisation; • Diffusion des messages de lutte contre les incendies de brousse	Continue	Tous les sites	CEP en coopération avec les autorités environnementales
Formation et éducation sur la gestion des infrastructures et la gestion des PME	• Utilisation appropriée des installations • Création et fonctionnement de la nouvelle PIU	Continue	Tous sites	de PME
Qualité de l'eau et du sol Paramètres généraux de qualité du sol et de l'eau:	• pH • Oxygène dissous • Solides totaux dissous • Conductivité • Turbidité • Potentiel de réduction d'oxydation de la température • Nutriments Une fois avant de démarrer le projet pour obtenir une situation de référence générale suivie de 2 fois par an (saison sèche et	Pour chaque site, 2 stations	d'échantillonnage: 1 dans une zone directement influencée par le projet et une à proximité non directement affectée par les activités	PIU en coopération avec DPDTA

	pluvieuse)			
Santé au travail	• Nombre de préservatifs distribués • Nombre de sensibilisation sur le VIH / SIDA réalisées (compte rendu des réunions); • Présence du fournisseur de services; • Nombre de réunions de sensibilisation et registres d'annonces	Mensuel	Pour tous les entrepreneurs et sous-traitants de tous les sites	Expert suivi et évaluation de la CEP Environnement)
Violence basée sur le genre (GVB) et GRM (mécanisme de règlement des griefs)	• Présence d'un prestataire de services • Nombre de demandes reçues Nombre de victimes assistées • Présence d'un code de conduite des travailleurs. • Enregistrements GRM sur la VBG et l'EES • Présence d'un plan VBG • Dossiers d'emploi indiquant l'âge	Mensuel	Pour tous les entrepreneurs et sous-traitants de tous les sites	CEP (expert en suivi et évaluation Expert environnemental)

Mise en œuvre du PGES

Pour la mise en œuvre du PGES, le dispositif institutionnel proposé pour la mise en œuvre du projet sera coordonné par INGD. Au sein d'INGD, le projet sera situé dans la division des zones arides et semi-arides. L'actuel Conseil technique pour la gestion des catastrophes (CTGC), qui se réunit trois fois par an et rassemble les principaux ministères d'exécution et agences au niveau ministériel, fera office de Comité de pilotage du projet (CPS). Le conseil technique est présidé par le directeur général d'INGC, qui coordonne la politique et la planification de haut niveau sur les problèmes de sécheresse et d'urgence. Le comité de pilotage fournira les directives générales de mise en œuvre de la politique et cherchera à intégrer les questions de sécheresse et de changement climatique dans les interventions sectorielles distinctes du projet. Le projet mettra en œuvre toutes les directives politiques fournies par le CTGC. Pour la mise en œuvre du PGES, il sera mis en œuvre en liaison avec le bureau des garanties d'INGD.

Au niveau provincial, le projet sera mis en œuvre en liaison avec la délégation de gestion des catastrophes et l'unité d'exécution du projet. Du point de vue environnemental, la capacité de l'INGD à mettre en œuvre ce PGES est faible à tous les niveaux, le projet doit créer un arrangement institutionnel qui devrait être conforme au mandat actuel du Bureau de sauvegarde et renforcer les capacités à tous les niveaux. En ce qui concerne les sauvegardes environnementales et sociales, du personnel dédié sera embauché et affecté à la CEP. Le personnel d'INGD travaillera en étroite collaboration avec l'équipe de sauvegarde locale. Le renforcement des capacités doit être donné à l'équipe locale pour transférer les responsabilités en matière de gestion environnementale et sociale. Les responsabilités en matière de gestion financière et d'audit resteront chez INGD. Pour le succès du processus, il faut une coordination efficace entre INGD à tous les niveaux avec le personnel de la CEP.

Pour la mise en œuvre du PGES, le projet allouera des ressources, le budget provisoire du projet a été calculé, sur la base des lignes de coûts suivantes:

• Sélection et préparation du processus de catégorisation des sous-projets par l'agence d'exécution;
• Paiement des consultants pour la préparation de l'EIES, du PGES, de l'ARAP pour les sous-projets;
• Coût de l'atténuation environnementale et sociale;
• Coût de la sensibilisation et de la formation et coût du suivi environnemental et des rapports.
• Renforcement des capacités institutionnelles des représentants de l'équipe de coordination aux niveaux national et local sur le suivi des garanties;
• Mise en œuvre des mesures d'atténuation proposées dans le cadre de l'EIES et du PGES;
• Fonctionnement du GRM. GVB et les comités de réinstallation;
• Mise en œuvre de mesures d'atténuation de la VBG;
• Permis de licence environnementale et autres permis (Lavra, DUAT etc.)
• Processus d'audit et de suivi environnemental par AQUA / Auditeur indépendant;
• Provision pour les salaires du personnel supplémentaire à embaucher par le projet;
Implémentation du protocole COVID 19.

Le tableau ci-dessous présente les estimations de coûts pour la mise en œuvre du PGES

Itens	Number of subprojects(t 6 districts)	Unity cost		Total cost		source of financing
		Local (1000 MZN)	Cost per subproject (1000 USD)	Local (1000 MZN)	Total(1000 USD)	
Screening by MTA/DPDTA/INGD	6.00	350.00	5.00	2,100.00	30.00	AfDB
Payment of Consultants to prepare of EIA, ESMP, RAP/ARAP for Subprojects	6.00	1,050.00	15.00	6,300.00	90.00	AfDB
Sensization and training cost of environmental monitoring and reporting	20.00	350.00	5.00	7,000.00	100.00	AfDB
Institutional capacity building for safeguards Cabinet		-		5,325.00	75.00	AfDB
Implementation of ESIA and ESMP/RAP/ARAP	6.00	700.00	10.00	4,200.00	60.00	AfDB
Operation of GRM	6.00	210.00	3.00	1,260.00	18.00	AfDB
Environmental premits and other permits	6.00	259.00	3.70	1,554.00	22.20	AfDB
Midterm audit of ES performance	1.00	350.00	5.00	350.00	5.00	AfDB
Completion of ES performance	1.00	350.00	5.00	350.00	5.00	AfDB
Salaries for Env and Social expert to be hired by the PIU	1.00	14,700.00	210.00	14,700.00	210.00	AfDB
Total		-		43,139.00	615.20	AfDB
Rate Usd/MZN 1: 70						

Le total des estimations pour la mise en œuvre du PGES est estimé à six cent mille quinze dollars américains (615 000,00). Les valeurs calculées ne sont qu'indicatives, ces chiffres seront ajustés au niveau des sous-projets. Les coûts du contractant seront financés à partir de ce budget, sur preuve d'enregistrement (par exemple, feuilles de temps, factures de matériel, etc.).

De manière générale, il est recommandé que les impacts identifiés et les mesures d'atténuation respectives proposées dans ce Plan de Gestion Environnementale et Sociale fassent partie intégrante du cahier des charges pour l'exécution des travaux et que leur mise en œuvre soit correctement supervisée par le promoteur du projet.

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ABBREVIATIONS AND ACRONYMS

AFDB	African Development Bank
CAE	Children Abuse Exploitation
CESMP	Contractor Environmental and Social Management Plan
CLINFREDEP	Climate Insurance Finance and Resilience Development Program
DINAB	National Directorate of Environment
DPDTA	Provincial Directorate of territorial development and Environment
E&S	Environmental and Social
ES	Environmental Specialist
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
GBV/SEA	Gender-Based Violence/Sexual Harassment and Abuse
GDP	Gross Domestic Product
GRM	Grievance Redress Mechanism
MADER	Ministry of Agriculture and Rural Development
MISAU	Ministry of Health
MTA	Ministry of Land and Environment
OHS	Occupational Health and Safety
PIU	Project Implementation Unit
RAP	Resettlement Action Plan
TA	Technical Assistance

VAC	Violence Against Children
WB/WBG	World Bank / World Bank Group

1. INTRODUCTION

1.1. PROJECT CONTEXT

Mozambique is located in a region cyclically is threatened by climate variability and extreme events such as droughts, floods, tropical cyclones and water borne disease epidemics, as well as earthquakes the climate changes, such events are expected to increase in frequency and intensity, in 2019 the country experienced the worst cyclone of the last 5 decades.

The cyclone IDAI and Kenneth shows the country that a resilient measure to deal with climate changes has to be implemented. The country is face challenges to deal with drought and flood every year, Climate change is estimated to affect over 58% of the population. Maputo, Gaza and Inhambane provinces, located in the south, are among the most adversely affected area in terms of climate change events with frequent occurrence of droughts in the northern parts, cyclones and floods in the coastal areas of the provinces.

The African Development Bank has recently funded a number of Project interventions in support of the agriculture and rural development sector in Mozambique, namely: i) The Post Cyclone Idai Emergency Recovery and Resilience Program; ii) the Drought Recovery and Agriculture Resilient Project; iii) the Value Chain and Youth Empowerment; iv) Project Baixo Limpopo Irrigation and Climate Resilient project (BLICR): v) the Massingir Dam and Smallholder Rehabilitation Supplementary II Project; vi) the Sustainable Land and Water Management Project (SLWRMP); and vii) The Emergency Humanitarian Relief Assistance Related to the 2019 Cyclone.

The Climate Insurance Finance and Resilient Development Program (CLINFREDEP) will promote the development of climate-resilient infrastructure and agricultural diversification using climate-smart agriculture practices to enhance Climate Resilience for sustained economic growth. The program is also to support the Government national preparedness plan to reduce social vulnerability to drought through adoption of preventive insurance policies and programs. The economies of Mozambique are dependent on Agriculture. Improved services will increase resilience of farmers to transport their produce to markets during rainy season thus avoiding loss of valuable lifeline produce. - The project will benefit the local population who are vulnerable (who are mostly women, children and the elderly) to the impacts of climate change through investments on smart agriculture and environmental finances through insurance. This will increase their resilience and protect livelihoods when they are able to buy food during droughts and access medical care during disease induced periods. - The project will support the implementation of a road accident database making easy the identification and maintenance of

accident black spots that are because of due to climate change. E.g. potholes and infrastructure destruction due to flooding after cyclones.

1.2. PROJECT OBJECTIVES

The main objective of the project is to reduce the risks of climate-related disasters and their impacts on the livelihoods of the most vulnerable by consolidating financial protection against the risks of climate disasters.

The specific objectives of the project are: (i) to enhance the country's resilience and response to climate shocks, by consolidating financial protection against climate-related disasters; (ii) to improve climate-resilient infrastructure; and (iii) to promote climate-resilient income-generating activities and strengthen food security and nutrition.

1.3. JUSTIFICATION FOR THE ESMF

The purpose of preparing this ESMF is that, during the implementation of the proposed CLINFREDEP, it was anticipated that both positive and negative environmental and social impacts will be generated due to the project activities and possibly affect the nearby biophysical and social environment. To preclude and manage the anticipated environmental and social impacts and risks of the project, to ensure adequate environmental and social impact and risk management during the CLINFREDEP implementation period, on Mozambique territory, applicable safeguards instruments shall be prepared. However, given that most of the precise designs and location of the proposed project activities, on Mozambique side, are not yet known at this stage for component 1 and 3, it is difficult to identify the actual risks and impacts of the project activities and manage those risks and impacts in the context of traditional Environmental and Social Impact Assessment (ESIA), thus an Environmental and Social Management Framework (ESMF) apply to set the Environmental and Social procedures for adequate subproject E&S assessment. As such, n compliance with the African Development Bank environmental safeguards, this “Environmental and Social Management Framework (ESMF)” document has been recommended and prepared for the overall project. This ESMF prepared for the CLINFREDEP acknowledges the probable impacts of the sub-projects, and integrates measures for assessing, avoiding, mitigating, and managing these during the planning/pre-construction, construction, operation, and management (O&M) stages of the sub-projects. The framework identifies the level of safeguard and due-diligence required for all categories of sub-projects and provides specific guidance on the policies and procedures to be followed for environmental and social assessment, along with roles and responsibilities of the implementing agencies to ensure effective management of the environmental and social impacts that may emanate from the project activities during the project implementation period. The overall goal of

the ESMF is to ensure that decision making in subsequent stages of the project is informed and influenced by environmental and social considerations for the implementation of each sub-project under the CLINFREDEP which location is not yet known.

1.4. ESMP PURPOSE AND OBJECTIVES

ESMF is an environmental and social instrument prepared during the project preparation phase and applies to projects that have multidimensional components and when the exact locations of each of sub-projects are not yet defined. The objective of the ESMF is to frame guidelines and procedures to deal with environmental and social impacts associated with the implementation of this project. The ESMF will help to:

i) establish a mechanism to systematically identify, predict, evaluate, and manage beneficial and adverse environmental and social impacts of the project activities.
ii) design enhancement measures for beneficial impacts.
iii) Recommend and implement mitigating measures for adverse impacts to comply with the requirement of National policies and laws and the World Bank Safeguards Policies.

The specific objectives of the ESMF are to:

- Assess the compatibility of GoM Policies and African Development Bank (AFDB) policies;
- Outline the process for identifying potential adverse social and environmental impacts due to the development of infrastructures under the project.
- Outline the process for identifying potential adverse social and environmental impacts due to implementation of value chain activities under component 3.
- Provide a guideline for preparing the environmental and social mitigation plans to address the adverse impacts.
- Establish a foundation for the GRM and GVB implementation to prevent conflicts at an early stage of the project.
- Assess PIU capacity to implement ESMF.
- Cost estimation for ESMF implementation.

The project will construct/rehabilitate water reservoirs, boreholes, food processing small unities etc. These activities in nature are expected to have environmental and social impacts during the construction and operation phases. The project was screened based on the Bank Safeguards and it was categorized under category 2. At the sub-project level, each sub-project will be screened using both Bank and Mozambican legislation. For the screening process to be done by the DPDTA (Provincial Environmental Authority), category A, B, and C will be chosen depending

on the associated environmental and social risks. Nonetheless, risks are not considered irreversible or unprecedented and impacts are site-specific and can be mitigated and remedied.

2. LEGAL FRAMEWORK

2.1. National environmental and social legal frameworks

The constitution of the Republic of Mozambique lays the ground for what is today the applicable environmental and social legal instruments. It provides that all the citizens have the right to a balanced environment and the duty to protect it[2]. It also provides that the state is required to ensure:

(i) The promotion of initiatives to ensure ecological balance and environmental preservation.
(ii) The implementation of policies to prevent and control pollution and integrate environmental concerns in all sectoral policies to guarantee the citizen the right to live in a balanced environment supported by sustainable development.

The proposed program has to be implemented within National and Bank legal and institutional framework that may be relevant to the project throughout its life cycle. Relevant environmental and social instruments and regulations required are presented in the next subsections. These subsections describe the regulations, major provisions, and its relevance for the project.

National Environmental Policy (Resolution No. 5/95)- Provides the basis for various other environmental legislation. The instrument has been enacted to ensure sustainable development while maintaining an acceptable balance between socio-economic development and environmental protection. It stipulates that the integration of environmental considerations in socio-economic planning, the management of the country's natural resources and the protection of ecosystems are essential ecological processes. The relevance of this instrument for the project is that the provision contained in it should be reflected in the project to minimize the project impacts on natural resources and ecosystems.

Environmental Law (Law No. 20/97)- Establishes the basis for environmental management as a pre-requisite for a country's sustainable development. In terms of scope, this applies to public and private activities directly or indirectly affecting the environment. The project conformity with this provision is critical to contribute to the country's sustainable development.

Regulation for Environmental Impact Assessment - ESIA (Decree No. 54/2015)- It defines the fundamental instruments for environmental management, the ESIA, which aims at mitigating the negative impacts that certain projects, in the public and private sectors, may cause to the

[2] Article 90

natural and socio-economic environment, through the undertaking of environmental studies prior to commencement of the projects. This also sets out the environmental impact assessment process, required environmental studies, public participation process, the studies review process, project environmental viability decision process, and environmental license emission. So, any project should be submitted to a formal ESIA process, under this regulation. So, for the CLINFREDEP, an environmental license needs to be obtained from MTA, and the issuance of the environmental license precedes any other license or permit required for the sub-projects.

Regulation on the Environmental Audit Process (Decree No. 25/2011) – Relates to the need and process for an environmental audit. It indicates that an environmental audit is a documented and objective instrument for management and systematic assessment of the management system and relevant documentation implemented to ensure the protection of the environment. Its objective is to assess compliance of work and operational processes with the environmental management plan, including the environmental legal requirements in force, as approved for a particular project. The proposed project should require independent environmental audits, without prejudice to the public that may be requested under this decree.

Regulation for Environmental Inspections (Decree No. 11/2006) – It governs the supervision, control, and verification of compliance with environmental protection rules in the country. It may happen that, during project implementation, MTA carries out inspections to verify compliance with environmental legislation and site management instruments (Environmental and Social Management Plan- ESMP). INGC shall allow for and facilitate the undertaking of such inspections.

Procedures on environmental licensing (Ministerial Diploma No. 129/2006) – stipulates the environmental license procedures, its format, and outline and contents of an environmental impact assessment report. The ministerial diploma aims to standardize the process and the procedures followed by various players in the environmental impact assessment process. The CLINFREDEP safeguards instruments (ESIA, ESMP, and RAP/ARAP) reports for various sub-projects, should be aligned with the provision of this regulation.

Public Participation methodologies and procedures (Ministerial Diploma No. 130/2006)- Defines the basic principles related to public participation, methodologies, and procedures. Considers public participation as an interactive process that initiates at the design stage and continues through the lifetime of the project. It defines that Public Participation Process (PPP) for ESIA must conform with the guidelines provided in this Ministerial Diploma.

Air quality

Environmental law (Law No. 20/97) - Establishes the maximum standard of toxic substances allowed for discharge into the air. The emissions are further stipulated in Decree No. 18/2004. This law is relevant for the project given the permitted level of emissions by law, so as not to harm the environment.

Regulation for Environmental Standards and Effluent Emission (Decree No. 18/2004 (as amended by Decree No.67/2010) - Establishes parameters for the maintenance of air quality; patterns of emission of gaseous pollutants for various industries; and standards for emission of gaseous pollutants from mobile sources - including light and heavy vehicles. The project shall comply with the air quality standards, considering the admissible emissions by law, so as not to harm the environment.

Water quality

Water quality for human consumption (Ministerial Diploma n. º180 / 2004) - Define water quality standards for human consumption and define measures for its control, to protect public health. Any project must meet water quality standards for human consumption.

Water Policy (Resolution No. 46/2007) – It provides aspects of sanitation in urban areas, peri-urban and rural areas, hydrologic networks, development of new hydraulic infrastructure, and integrated management of water resources with the participation of interested parties.

Water user use (Law No. 16/91) – The policy seeks to protect ecological balance and environment. The use of water requires concession- permanent or long-term water uses; or a water license- short term water uses. Licenses are issued for a period of 5 renewable years, while concessions may go up to 50 renewable years. The law provides that any activity with the potential of contaminating or degrading public waters, in particular the discharge of effluent, is subject to a special authorization to be issued by the Regional Water Administration and payment of a fee. If the project requires the abstraction of water from natural sources, a water license must be obtained from the competent authority (Regional Administration of the Waters). If the project requires the discharge of effluents into water bodies (such as may be required by construction camps), a license must be obtained.

Environmental Quality Standards and Effluent Emissions Decree No. 18/2004 –this defines that when an industrial effluent is discharged into the environment, the final effluent must comply with discharge standards established. The law also incorporates the discharge of domestic effluents.

Pollution (Law No. 20/97) – The law forbids the production and deposition of any toxic or polluting substances on soils, sub-soils, water, or the atmosphere, as well as forbidding any

activities which are likely to accelerate any form of environmental degradation beyond the legally established limits. The project needs to include measures to prevent pollution throughout its life cycle. Project compliance with regulation is critical.

Hazardous Waste Management (Decree No. 83/2014) – Establishes the legal framework for hazardous waste management. The key objective is to lay down rules for the production, collection, or disposal of hazardous waste to minimize the negative impacts on health and the environment. MTA is responsible for hazardous waste management, especially in licensing of management units. Only registered and licensed entities may collect and transport the waste outside the limits of the facilities. The project must conform to the regulation's requirements related to the management of hazardous wastes during construction work and operation.

Land Use and Rights

Land Policy (Resolution No. 10/95) – It sets out that the State must provide the land for an investments and is responsible for land use and physical planning, although plans can be made by the private sector. Land use rights (Law No. 19/1997) – Establishes the rights of land use, including details on customary rights and procedures for acquisition and use of land titles by communities and individuals. The law recognizes and protects the rights acquired through inheritance and occupation (customary rights and duties of good faith), except for legally defined reserves or areas where land has been legally transferred to another person or institution.

Protection Zones (Decree No. 66/98) – It is a regulation that defines total protection areas, set aside for nature conservation and State defence, as well as partial protection areas, where land-use titles may not be granted, and where activities cannot be implemented without a license. Partial protection areas, which include, amongst others: 50 m strip of land along lakes and rivers, 250 m strip of land surrounding dams and reservoirs, 100 m strip of land along the seafront and estuaries, a strip of 2 km along the terrestrial border, applicable for the component 1, the proposed buildings can be accommodated within this particular zone. A 15 m corridor surrounding secondary and tertiary roads (applicable for road construction sub-projects), and 30 m corridor for primary roads, is also considered a partial protection zone and the land use in this corridor is thus reserved for the road infrastructure. There is also a 50 m corridor protection for the railway lines. This regulation defines total and partial protection zones. In these zones, land use is restricted. The project should consider the interferences with these protection zones.

Regulation for the Resettlement Process Resulting from Economic Activities (Decree No 31/2012) –Stipulates rules and basic principles for resettlement processes from the implementation of public or private economic activities. Equally, it provides that the Resettlement Plan is part of the ESIA process and that its approval precedes the issuance of the environmental license. This regulation states that if a project results in physical or economic

resettlement, a Resettlement Plan needs to be developed as part of the ESIA process and approved.

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Territorial Planning (Decree No. 23/2008) – It establishes regulatory territorial planning measures and procedures, to ensure the rational and sustainable use of natural resources, regional potentials, infrastructure and urban centres, and to promote national cohesion and safety of the population. It deals with issues of procedures for expropriation of private property for national public interest reasons. The regulation provides that expropriation for territorial planning is considered to be of public interest if it aims to acquire areas to build economic or social infrastructure with great social positive impacts. Additionally, it states that expropriation should be preceded by just compensation. Most likely, the project will require the expropriation of land and land rights in the project area. The expropriation process should abide by the requirements stated in this regulation, namely the principle of just compensation for losses of property or goods. Expropriation requires the issuance of a declaration of public interest for the project.

Guidelines for the Expropriation Process Resulting from Territorial Planning (Ministerial Diploma No. 181/2010) – Sets procedures for the expropriation processes resulting from territorial planning, including procedures for the issuance of a declaration of public interest, compensations for expropriation (including calculation methods) and the expropriation process itself. Expropriation of land and land rights within the project area must follow the procedures established in these guidelines.

Cultural Heritage

Cultural Heritage (Law No. 10/88) – This seeks to protect material and non-material assets of the Mozambican cultural heritage. Material cultural assets include monuments, groups of buildings with historic, artistic or scientific importance, places or locations (with archaeological, historic, aesthetic, ethnologic or anthropologic interest) and natural elements (physical and biological formations with particular interest from an aesthetic or scientific point of view). If archaeological objects are found during sub-projects implementation, this law shall apply and the subcontractor shall communicate the finding to the appropriate cultural heritage agency, immediately.

Biodiversity

Biodiversity protection (Law No. 20/97) – Covers aspects of guaranteeing the protection of biological resources, particularly of plant or animal species threatened with extinction or any similar issue, by their genetic value, ecological, cultural, or scientific, require special attention.

Protection is extended to their habitats, especially those built in areas of environmental protection. This law is in line with the conservation areas (Law No. 16/2014), which stipulates that all activities that could result in changes to land and vegetation cover, or that could disturb flora, fauna, and ecological processes up to the point of compromising their maintenance, are forbidden within national parks, except if required for scientific reasons or management needs. It also indicates that activities can be approved within conservation areas, provided that a management plan is developed and approved.

Labour Safety

The Labour Law (23/2007) is the main statute governing all aspects of the employment relationship. There is also other derivative legislation on various lateral aspects of the employment relationship (e.g., the legal framework on domestic work. It also determines the minimal wages per sector. The country was also established by Law No. 4/2007 of February 7, the legal framework for social protection. This Law defines the foundation that underpins Social Protection and organizes the Social Protection system. The social protection system is structured in three levels, namely: a) Basic Social Security; b) Mandatory Social Security; c) Complementary Social Security. The mandatory social security has the objective to ensure the livelihood of workers who lack or have a decreased capacity to work as well as to ensure the livelihood of surviving family members in case of the death of the aforementioned worker and to provide supplementary conditions for survival. Contributions to mandatory social security are distributed between employers and workers.

Protection of Workers with HIV/AIDS (Law nº 5/2002) – It sets out general principles that aim to ensure that all employees and job applicants are not discriminated against in the workplace or when applying for jobs, for being suspected of having or having HIV/AIDS. Under the law, an employee who is infected with HIV/AIDS in the workplace, in connection with their professional occupation, in addition to the compensation which one is entitled to have, one must have adequate health care guaranteed to relieve one's health status, according to the labour law and other applicable legislation, funded by the employer. Under the same law, it is prohibited to test for HIV/AIDS in workers, job seekers, candidates to evaluate the training or promotion candidates at the request of employers, without the employee's or job seeker consent. Labour inspection (Decree nº 45/2009) – This regulation lays down the rules on inspections, under the control of the legality of work It states the employer's responsibility for the prevention of occupational health and safety risks of the employee. These provisions must be enforced under the CLINFREDEP, especially concerning contractors involved in different sub-projects.

Labour relations (Law Nº 23 /2007) – This law governs work relations between employers and domestic and foreign workers in all industries. The law includes principles of safety, hygiene and health of workers. Under the law, an employer must provide their employees, good physical condition, environmental and moral work, inform them about the risks of their work, and instruct

them about compliance with the standards for hygiene and safety at work. The employer must also provide first aid to workers in the event of accidents, sudden illness, poisoning, or feeling unwell.

Gender Biased violence

In Mozambique there is no specific legislation on Gender. However, the Ministry of Gender has developed policies and strategic plans to decrease gender-based inequalities within different sectors.

In spite of no specific legislation, the need of mainstreaming gender is referred in different pieces of legislation. In the last years, the Parliament has approved the Family Law 10/2004 of 25 August 2004, the reformed Family Law establishes gender equality within a society and it also gives same responsibilities and benefits to male and female within the family. Mozambique is reported to have one of the highest level of violence against women and girls, as well as premature marriages in Southern Africa, due to the traditional norms of "ritos de Iniciação", so to regulate approved the Law No 29/2009 on Domestic Violence 2009, in 2019 the parliament passes on the Law Against Premature Marriages.

The National Institute of Disaster and Risk reduction management (INGD) prepared its gender strategy 2016-2020, which includes the following main results:

- Establishment of the Gender Unity at INGC to implement, M&E the Gender Action Plan Ensure the equitable participation of women and men in the disaster risk management and adaptation to climate change actions;
- Improve the socio economic response to the women needs in the prevention, mitigation and recovery process in a situation of disaster;
- Ensure the participation and access to economic and natural resources of women and during the period of recover, reconstruction and rehabilitation after disaster;
- Improve the response to the women needs during the preparation and response to emergency;
- Ensure social protection to vulnerable groups during the risk reduction to disasters and adaptation to climate change

This strategy did not include clearly the action against gender biased violence, which has been systematically reported in the rescue camps . To develop a comprehensive approach for the GVB during the emergency situation the strategy is in revision.

INGD, based on this strategy has indicated gender focal points at national level. With the New institute (INGD), gender issues will be included in the newly established Safeguards Gab net The GBV in this project may be expected among vulnerable people specifically women and young girls as the project will require influx workers due to construction activities, At the operation phase women may be excluded from the benefits of the project, just because there are women, therefore equity issues shall be considered at the early stage.

Climate change

Mozambique remains extremely vulnerable to climate variability and change. Droughts, severe flooding, and coastal storms are increasing in frequency and severity. This has affected the country's economic performance. Increased variability of weather and climate patterns could slow and even reverse the progress made on poverty reduction in recent years in Mozambique. While uncertainties remain, it seems likely that climate and weather variability will increase exerting important impacts on the water sector and related livelihoods. In addition, inter-annual variability was predicted to increase dramatically, suggesting extreme weather events such as droughts and floods may become more frequent. The future temperature of Mozambique is predicted to increase in the next years, while the seasonal variability is narrowing as the average minimum temperature has increased, which combined may lead to greatly increased potential evapotranspiration year round. At the same time, precipitations are likely to become increasingly variable and uncertain. The environmental legal framework is overall referred to as the need for balanced development and recognized the vulnerability of Mozambique to Climate Change. In 2010 the country approves the National Climate Change Adaptation and Mitigation Strategy (NCCAMS), which represents a turning point in Mozambique's response to the challenges of climate change, indicating a clear set of strategic actions to be implemented so that Mozambique can ensure a more prosperous, resilient and sustainable future.

2.2. The Bank African Development Bank Integrated Safeguards System (ISS)

The Integrated Safeguards System of the African Development Bank was developed in 2013 and adopted in 2014. The Operation Safeguards are mechanisms by which the AfDB integrates the environmental and social issues into decision making. It supports participatory approaches and transparency. They provide a set of specialized tools to support development processes as follows. The OSs are intended to: Better integrate considerations of environmental and social impacts ; Prevent projects from adversely affecting the environment and local communities or, where prevention is not possible, minimise, mitigate and/or compensate for adverse effects and maximise development benefits; Systematically consider the impact of climate change on the sustainability of investment projects and the contribution of projects to global greenhouse gas emissions; Delineate the roles and responsibilities of the Bank and its borrowers or clients in

implementing projects, achieving sustainable outcomes, and promoting local participation; and Assist regional member countries and borrowers/ clients in strengthening their own safeguards systems and their capacity to manage environmental and social risks. The OSs are summarized as follow:

OS 1: Environmental and Social Assessment – This overarching safeguard governs the process of determining a project's environmental and social category and the resulting environmental and social assessment requirements: the scope of application; categorisation; use of a SESA and ESIA, where appropriate; Environmental and Social Management Plans; climate change vulnerability assessment; public consultation; community impacts; appraisal and treatment of vulnerable groups; and grievance procedures.

OS 2: Involuntary Resettlement: Land Acquisition, Population Displacement and Compensation – This safeguard consolidates the policy commitments and requirements set out in the Bank's policy on involuntary resettlement, and it incorporates refinements designed to improve the operational effectiveness of those requirements. The safeguard retains the requirement to provide compensation at full replacement cost; reiterates the importance of a resettlement that improves standards of living, income earning capacity, and overall means of livelihood; and emphasises the need to ensure that social considerations, such as gender, age, and stakes in the project outcome, do not disenfranchise particular project-affected people.

OS 3: Biodiversity and Ecosystem Services – The overarching objective of this safeguard is to conserve biological diversity and promote the sustainable use of natural resources. The safeguard reflects the importance of biodiversity on the African continent and the value of key ecosystems to the population, emphasising the need to "respect, conserve and maintain [the] knowledge, innovations and practices of indigenous and local communities.

OS 4: Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource Efficiency – This safeguard covers the range of impacts of pollution, waste, and hazardous materials for which there are agreed international conventions and comprehensive industry-specific standards that other multilateral development banks follow.

OS 5: Labour Conditions, Health and Safety – This safeguard establishes the Bank's requirements for its borrowers or clients concerning workers' conditions, rights and protection from abuse or exploitation. It covers working conditions, workers' organisations, occupational health and safety, and avoidance of child or forced labour.

The projects are expected to have positive environmental and social impacts, with relatively minor and localized negative impacts. The ESMP has been developed to ensure environmental and social due diligence for the project. Based on this, the table below identifies and justifies the Bank OS that will be triggered by the Value Chain Project.

Table 2:AfDB operational Safeguards triggered by the project

Operational Safeguard	Triggered	Justification
OS 1: Environmental and Social Assessment	Yes	The policy is triggered due to the physical interventions that will be implemented during the implementation of the project components
OS 2: Involuntary Resettlement: Land Acquisition, Population Displacement and Compensation	No	The project does not anticipated any resettlement
OS 3: Biodiversity and Ecosystem Services	No	The project is expected to be implemented in already cleared area.
OS 4: Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource Efficiency	Yes	The project will stimulate the use of fertilizer, pesticides and drugs for animal as well as any other agrochemicals
OS 5: Labour Conditions, Health and Safety	Yes	There will be employment in construction and operation as well as in farms and agricultural value chains

Under OS 1, the Bank as defined five categories based on the screening process undertaken by the Bank namely:

Category 1: Projects likely to induce important adverse and irreversible environmental and/or social impacts, such as the displacement of more than 200 people. A full ESIA and an ESMP are required, and a RAP may apply.

Category 2: Projects likely to induce detrimental, site-specific environmental and/or social impacts that can be minimised by including mitigation measures in an ESMP and in an Abbreviated Resettlement Action Plan (ARAP), when applicable.

Category 3: Projects that will not induce adverse impacts. These projects do not require further environmental and social action.
Category 4: Projects that involve subprojects which may result in adverse environmental and/or social impacts and for which the AfDB's investments are handled by a financial intermediary. These projects must assess the intermediary's capacity to address environmental and social concerns.

This project under the Bank system was categorized as 2 because the impacts are anticipated to be site-specific, largely reversible, and readily minimized by applying appropriate management and mitigation measures or incorporating internationally recognized design criteria and standards. The project targeted water provision and agriculture value chain. The project component 1 and 2 may impose some impacts to the environment as it will involve construction of water reservoirs resilient infrastructures, road rehabilitation dikes and other protective infrastructures within coastal line to reduce the erosion, as referred before the exact location of the subproject are not yet known. Each of intervention will be subject to the screening process under the Mozambican legislation and shall obtain the environmental license, and in that case DPDTA screening process of each sub component may be considered as a stand-alone project and be categorized under category B or C.

In parallel World Bank have developed comprehensive safeguard policies that are in line with the African Development Bank policies and Mozambican legislation. The World Bank policies consider ten operation policies that have to be taken in consideration when doing studies like this. Under the WB, OP 4.01, 4.09 are triggered by this project. Mozambique is a signatory to international conventions and goals that were taken into account in developing the ESMP of the proposed project. The United Nations Convention on Climate Change, the UN Convention on Desertification, and the Millennium Development Goals (MDGs-goal 1 and 7) are among the main international instruments that the project aims to contribute to their achievement and in the long run strengthening the climate adaptation capacity of rural Mozambicans in semi-arid and arid zones.

2.3. PROJECT DESCRIPTION

The project will bring "climate-smart" agricultural production systems and promote actions that are enhancing resilience of production systems of vulnerable population by restoring degraded ecosystems, improving living conditions, integrating climate information into agriculture activities and integrated management of natural resources. The CLINFREDEP will also contribute to the first objective of the SEP and the first pillar of the Country Strategy Paper through the envisaged increased agriculture productivity as a result of the *improved water and land management activities*. This project consists of 4 components, namely:

Table 3: Project components and subcomponents

Component	Sub-Component and Associated Activities	Environmental safeguards
Component 1: Construct/rehabilitate climate resilient infrastructures	**A.1 Sub-Component 2: Construct Water Harvesting Infrastructure** • Surface and subsurface water reservoirs • Water Troughs for Livestock • Multifunctional solar-powered boreholes • Rainwater harvesting systems • Installation of water desalination systems **A.2 Sub-Component 3: Rehabilitate Degraded Infrastructures and landscapes** • Rehabilitate 20 km of climate proof rural roads in 2 districts • Construct protecting dikes along coastal areas • Rehabilitate places affected by erosion	EIA/ ESMP for construction activities Impacts under the biophysical environment; Social impacts on occupational health,
Component 2: Improved Food Security and marketing to Increase Resilience to Climate Change	**B.1 Sub-comp 1: Improved Climate Smart Agriculture Production** • Supplying irrigation kits using solar panels • Research and supply of climate proof and resilient seeds • Conservation Agriculture • Agro-forest techniques • Forest fire prevention activities **B.2 Sub-comp 2 Improve food security and nutrition diversification** • Farmers trained on small-scale irrigation agriculture • Training of trainers in nutrition, food processing, business management & hygiene • Improve nutrition information systems • Training on land management • Supply kits for artificial insemination for cattle to make it more resilient to drought	Identification of best practices and enhancement of the climate resilient options; Capacity building program (no need for EIA/ESMP);

Component	Sub-Component and Associated Activities	Environmental safeguards
	• Promote small ruminants that are more drought tolerant **B.3 Sub-Comp 3 Strengthen Value Chains, Market Linkages and Diversification** • Small Agro processing units for vegetable and agriculture products; • Promoting processing units of wild fruits; • Market support: Engage service providers/marketing agents; • Construction of Marketing Service centers.	EIA/ESMP for food processing infrastructure
Component 3: Support the Establishment of Climate Insurance and Emergency Fund	**C.1 Developing climate risk management solutions** • Elaborate climate risk profiles; • Elaboration of contingency plans and vulnerability assessments; • Provision of technical assistance on implementation the DRM law; • Support the emergency fund; • Strengthen earlier warning systems; • Design the Strategy for Arid and Semi-Arid Zones. **C.2. Supporting access to climate risk insurance** • Support to the payment of the insurance premium; • Training on mainstreaming risk financing into development planning and parametric insurance.	Technical assistance and capacity building
Component 4: Project Management and Coordination	**D.1 Project Management and Monitoring and Evaluation** o Support the Project Management Unit o Designing a Monitoring and Evaluation system and building capacity of local data systems for resilience tracking o Capacity building to the Executing Agency that will include in-house and cross-cutting studies	Project management

Component	Sub-Component and Associated Activities	Environmental safeguards
	○ Annual financial Audit	

The exact location of the subprojects is not yet known at this moment. However, the project will target the following provinces and districts: (i) Maputo (Magude, Moamba and Marracuene; (ii) Gaza (Mapai, Mabalane and Massingir) and; (ii) Inahambane (Guvuro, Mabote and Funhalouro),

3. RESPONSIBILITIES AND INSTITUTIONAL ARRANGEMENTS

For the implementation of the ESMP the institutional arrangement proposed for the project implementation will be considered as the client, therefore the responsibility to implement these mitigation measures lies ultimately on the management unit at both central and provincial level. The overall responsibility of the environmental and social monitoring will lie with PIU based at INGD in close collaboration with the MITADER/DPTADER and the African Developing Bank. PIU will hire an Environmental and social safeguards specialist expert with strong knowledge on environmental, social and climate change issues to overseen the implementation of the ESMP. This expert will work in liaison with the Safeguard Cabinet team at national level and local level. Good number of key staff involved in the implementation of the project may require on-site-training to enhance their ability on various environmental aspects (screening process), reviews, including monitoring and compliance which will be helpful in handling environmental and social aspects of the project. The Social and Environmental expert will responsibility with whole exercise of ESMP involving monitoring compliance with regulations, managing worksites, executing specific environmental and social works, managing GRM and seeking solutions to emerging environmental problems. The Environmental and Social expert will ensure regular reporting, depending on the aspects being monitored to avoid any serious environmental consequences.
During the implementation of the project the role and responsibilities for the implementation of ESMP as described in the following table.

Table 4: Role and Responsibility of Stakeholders

Stage in Sub Project Cycle	**Responsible unity**	**Role and responsibilities**
Sub Project Identification and screening process	Arid and Semi-Arid Division AfDB Environmental and Social Expert of the Project and	Overall coordination implementation of the project; Project financing Preparation of the environmental Instruction Process for categorization; Undertake subproject Screening and

	Safeguard team (INGD) DPDTA	determine eligibility Determine Category and required Instruments (ESIA, ESMP and RAP)
Sub Project Preparation (Feasibility Study and Design)	Consultant hired by the project Environmental and Social expert of the project and Safeguard office team	Prepare the safeguards instruments in accordance ESIA/ESMP for each subproject Monitor the implementation of the ESMF and RPF by contractor
Review and approval	Environmental and Social expert of the project and INGD safeguard team AFDB Provincial government (DPDTA)	Review safeguards documents; Site Specific ESIA, ESMP and RAP Approval (environmental licence issued);
Project Implementation	Contractors HSE Officer and Community Liaison Officer; District administration INGC	Overseen the implementation and monitor of ESIA, ESMP and RAP (auditing) Include E and S Specifications in Bidding

	Environmental and Social Safeguards Specialist; Civil Society Organisations AfDB	Documents and E and S Clauses in Contractor's Contract To oversee the implement and Monitor the project GRM and formation of Grievance Redress Committees and the implementation of the ESIA and ESMP of the subj project; Participate in the resolution process of any community complaint
Operation/ maintenance	INGD Local Communities	ESIA/ESMP implementation

INGC at national level and delegates in both provinces is the Client/Developer and has the overall responsibility with regards to the implementation of the project in an environmentally sound and responsible manner and to guarantee that the implementation responds to the requirements of the African Development Bank. The roles of INGD Environmental and Social Safeguards Specialist are to:

- Ensure instruction of the process MTA DPDTA
- Ensure that the ESMP is provided to the Supervisor/Engineer for reference at the start of the contract
- Ensure that the project ESMP is approved by MTA and Funding Agency;
- Establish and ensure that any environmental supervision and other actions required by MTA are accomplished;
- Ensure that E and S Specifications and a copy of the ESMP is included in the bid documentation issued to prospective contractors where the preparation of a sub-project of the ESMP is to be delegated to the Contractor and also include Environmental and Social Clauses in Contractor's Contracts
- Establish and maintain regular and proactive communications with the Contractor, Supervisor/Engineer and Environmental Officer;

- Review and comment on environmental reports produced by the Supervisor/Engineer, Contractor and Environmental Officer;
- Report to Funding Agencies when required on the state of the environmental management the project;
- Ensure that the ESMP is reviewed and updated as necessary.

The works to be undertaken are divided into a number of procurement processes based on the nature of the works and the location. Therefore, several contractors are expected to participate in the construction phases of the project. The roles of the contractor will be as follows:

- Comply with the E and S Specifications included in the bidding documents and the requirements incorporated in this ESMP, according to acceptable standards and techniques, practices and methods for the construction activities of the project that conform to standards and minimize possible environmental damages that could occur in the course of the activities;
- Prepare and Implement a Health and Safety Plan that includes induction and training , and an Emergency Preparedness and Response Plan to Prevent or minimize the occurrence and the effects of accidents that could result in environmental damages and health and safety of workers and surrounding communities ;
- Enhance the beneficial impacts of the project to the communities;
- Be open to be periodically subjected to inspections and audits and provide the necessary information in that regard. The contractor must in addition conduct its own audits, to ensure the compliance with the EIA and this ESMP, in particular;
- Prepare and submit plans showing the methods to be used to ensure compliance with the environmental requirements;
- Carries out due diligence and supervision;
- Ensures due diligence on implementation of Bank environmental policies;
- Provides advice to Borrower on enhancement of ESMP implementation;
- Conduct Monitoring a supervision, review any noncompliance issues, agree on corrective actions;
- Maintain contacts with MTA on the ESMP implementation, supervision and environmental performance of the project;
- Facilitate and financing the Capacity building measures for the PIU (Environmental officer at INGD).

Complementary initiatives will include: (i) complemented cohesive working of relationships between the INGD,MADER, DPDTA, the NGO and other relevant ministries and, other key stakeholders in agricultural production; (ii) capacity building of community members and farmers focusing on resilient agricultural production systems and practices; (iii)

mainstreaming public health and HIV/AIDS in the overall operations of the agricultural sector and other economic activities; (iv) engagement and support for some local interventions that will ensure good environmental management in agricultural production; (v) other complementary initiatives could include: (i) agro processing and agro-processing by product; (ii) supplementary livestock feed production.

3.1. IMPLEMENTATION ARRANGEMENTS

The Ministry of Land and Environment (MTA, ex-MITADER) is the central body overseeing environmental and social matters. At the provincial level, MTA is represented by the Provincial Directorates of Land Development and Environment (DPDTA). At the district level, MTA is represented by the Planning and Infrastructure District Services (SDPI). MTA monitors Environmental and Social Impact Assessment (ESIA) through the Environment National Directorate (DINAB), at a national level, and through the DPDTA, at a provincial level. Likewise, MTA manages and monitors environmental quality, notable aspects such as pollution control, water, soils and air quality, noise emissions, and waste management. Though the National Directorate of Land Development, the MTA is also involved in establishing, implementing, overseeing, and monitoring environmental policy and practice, including resettlement aspects.

Issues of water, air, and soil pollution control are managed by the National Agency for the Control of Environmental Quality (AQUA). Conservation areas fall under the responsibility of the National Administration of Conservation Areas (ANAC) within MTA. The Ministry of Tourism and Culture oversees among others, cultural and archaeological resources. It directs and controls the delivery of State policy, programs, and plans in the area of culture.

The project will be implemented over a period of five years, from March 2021 to February 2026. The Executing Agency will be the National Disaster management Institute (INGD.

The INGC, was established in 1999, coordinates disaster risk management activities in Mozambique and operates under the Ministry of State Administration (MAE) with a mandate to coordinate emergencies, promote disaster prevention through population and government mobilization; protect human lives; ensure multi-sectoral coordination in disaster emergency; coordinate early warning systems; carry out public awareness; and implement projects to recover arid and semi-arid zones affected by drought. INGD (Institute of Disaster Management) was created by the presidential resolution nr3/2021, January 15, the new institution focus mostly on preparedness, response and mitigation aspects, regarding any disaster (natural, social and health)

happening in the country. The INGD is leaded by a President indicated by the President of Republic and is divided by technical Division, cabinet at central level. Then at regional level it has a regional (South, Central and North) and provincial delegation. At district level, delegation will be established in districts with high risk of disaster.

The structure of INGD is composed by the following division and cabinets:

- Prevention and mitigation Division
- PLanning and Cooperation Division
- Post Desters reconstruction Division
- Arid and Semi-Arid Development Division
- Financing Division

And Office:

- Office of the General manger
- Internal auditing office
- Communication and marketing Office
- Social and Environmental Safeguards Office

Inter-ministerial Bodies managed by INGD namely:

- Disaster and Risk Management Fund
- National Unity for civil protection
- CENOE

Within INGD the project will be located at the Arid and Semi-Arid Zone Division. The existing Technical Council for Disaster Management (CTGC), which meets three times a year and brings together key line ministries and agencies at ministerial level, will serve as the Project Steering Committee (PSC). The technical council is chaired by the General Director of INGC, who coordinates high level policy and planning on drought and emergency issues. The Steering Committee will provide overall policy implementation directives and will seek to integrate drought and climate change issues into the distinct sectoral interventions made by the Project. The Project will implement all policy guidelines provided by the CTGC. For the implementation of ESMP it will be implemented in liaison with the Safeguards office at INGD.

At provincial level the project will be implemented in liaison with the Disaster management delegation and the project implementation unity. From the environmental perspective the INGD capacity to implement this ESMP is weak in all level,, the project must create an institutional arrangement that should be in line with the existing Safeguard Office mandate and build capacity at all level. Regarding environmental and social safeguards, dedicated staff will be hired and allocated to the PIU . INGD staff will work closely with the local safeguard team. Capacity building must be given to the local team to transfer responsibilities in environmental and social management. Financial Management and Audit responsibilities will remain at INGD. For the success of the process, there is a need for efficient coordination between INGD at all level with the PIU staff.

As stated in the project appraisal document, the project will be implemented by INGD. DINAB, DINOTER, and the DPTA will also be responsible to monitor and audit the implementation of the safeguard instruments at the sub-project level.

Under PIU the environmental and social expert shall guarantee that the contractors implements the ESMP. ESMP shall, therefore, be a part of the biding document. For the noncompliance with environmental safeguards, a disciplinary policy shall be applied, Special attention and specific training on climate change implications will be assured to provincial core team and the rest of the implementation actors. In the agriculture components, the INGC will be working closely with the extension workers under SUSTENTA.

4. BASELINE PROJECT AREA DESCRIPTION

4.1. BIO-PHYSICAL CONDITIONS IN THE PROJECT AREA

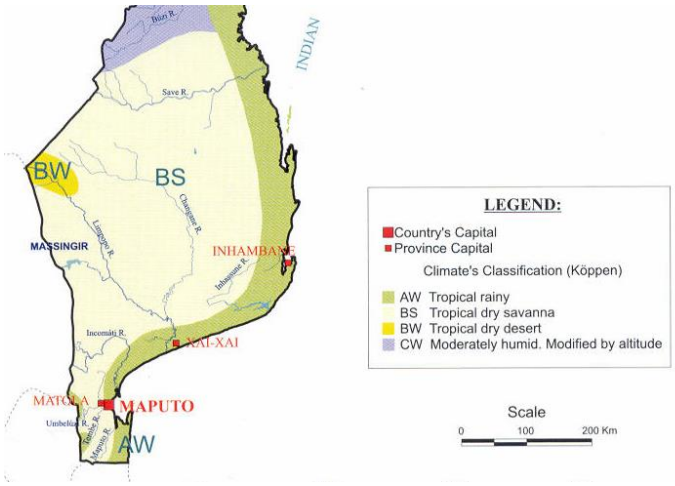
The project will be implemented in Maputo, Gaza and Inhambane, provinces that suffers from cyclic drought. The coastal area of Inhambane is cyclically affected by storms and cyclones. This result in systematic crop failure and livestock death, therefore making people in these area vulnerable to climate change.

Climate

According to Köppen, the area is classified as tropical with wet dry season. Specifically, the area coved by this study, presents typical characteristics of zones with a type of climate that varies from arid type (BW) in the interior next to Zimbabwe and semi-arid (BS) between this and the coastal zone (Figure 01). The annual average temperature varies from 23 to 26 ^{o}C showing a gradient of the coast to the inland. The normal variation of the temperature in this part of the country is affected by cold fronts, more frequent in the winter. The cold fronts are usually associated to the depressions and bringing rains. In some cases, the temperature will be able to go down 5 °C in the coastal region (INGC et al., 2003). The temperature variation interval is appropriate for agriculture practices, being the water scarcity (deficit) the great limiting factor.

Climate change is an important component of prospects for sustainable development. Some changes are likely to have positive outcomes, at least in the short-term. But many of the changes are anticipated to be negative, such as possible delays in the onset of rains particularly in the already drought-prone south of Mozambique. Therefore, adaptive capacity is required to harness positive changes as well as deal with negative ones.

Figure 1: Climatic Regions at the Southern Save River



Geology and Soil

The geology of the districts does not vary much as the main soil classifications are common along the entire west region of Mozambique; with sedimentary basin and alluvial and fluvial zone characterized by alluvial deposits of the Holocene and managa sediments layer of less than 20m Pleistocene hard sodic deposits. Circular depressions occur at the foot of slopes and drainage lines and also red Pleistocene, post managa deposits, outcrops of sedimentary, rocks of karro, cretaceous or tertiary origin can be found.

Land Resources

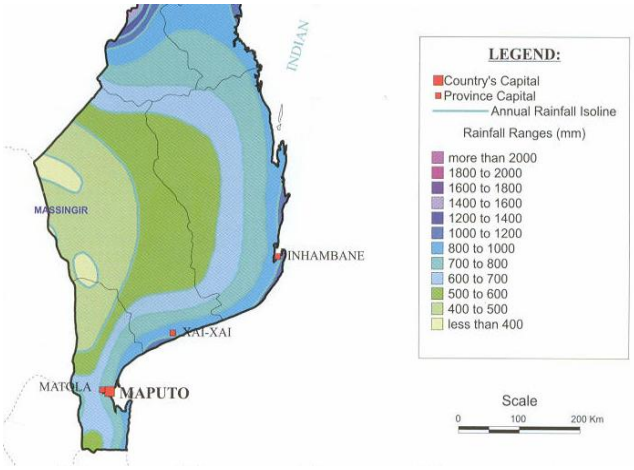
Land resources have been intensively exploited for livestock production and crop cultivation. Due to poor climatic conditions, agriculture development is done in marginal lands. During the site visits, it was evident that the dense mopane forest covering an extensive area were being destroyed by forest fires and by local populations for purposes of charcoal production and land preparation for crop cultivation within. The current encroachment of forested areas may damage the resources sooner or later as being observed in other parts of the province. Landslides and erosion problems are already cropping up in the area. The land holding size varies areas according to location based on agriculture annual survey the average farmland is about 0.5- 2.5ha/household (HH), relatively larger plots assigned are about 10ha/HH.

Water and Hydrologic Cycle

The relative air humidity is in general superior to 70%, reaching higher values from May to August, with the exception of the most arid areas of the Pafúri region (Gaza province). The area of Pafúri presents relative humidity lower than 70% during the hot season (October to March). The values of the insolation are relatively constant during all years, varying between the 50 and 70%. The wind tends to blow relatively stronger in the months of September to December, varying between 10 and 2, 5 m/s. The reference evapotranspiration increases from the coast with average values of 1,250 mm to the interior where it reaches the values of 1,500 mm in the most arid zones in the region of Pafúri.

The annual average rainfall in the project area varies from 900 mm in the coastal zone to 350 mm in Pafúri (figure 02), presenting a great interanual variability with a coefficient of variation of about 40% (Reddy 1986).

Figure 2: Rainfall variability in the Southern part of Mozambique



The rainfall irregularity is causing frequent droughts in the interior parts of the province varying from 900 mm in the coastal areas up to 350 mm in the interior region of Pafúri Besides the space variation, the rainfall also varies considerably according to the period of the year as presented in figure 04. The rainfall regime presents two distinct seasons throughout the year, a wet season (October to March) occurring about 76 to 84% of the total annual rainfall and the dry season that goes from April to September with about 26 to 24% of the total annual rainfall. The wet season occurs in the hot period and the dry season in the cold period (Reddy 1986). The Figure 04 presents the distribution of the rainfall throughout the months for different places of the study region. The study area involving the 04 districts covered by the program is delimited at the north by Save river and the South by Limpopo, Incomati and Maputo rivers, both rivers with international basins and similar characteristics.

Vegetation resources

The total woody vegetation cover in Mozambique is estimated at 54.8 million ha accounting for 70% of the surface area of the country. Out of this area, 40.1 million ha (51% of the country's surface) are forests of which 26.9 million ha have the potential for timber production and 13.2 million ha is the area occupied by forest reserves. The remaining area of approximately 14.7 million ha consists of multiple-use forests (19% of the country's surface). This area is covered by different types of forest, miombo and mopane being the most common. The open mopane occurs in an area with low level of rain, about 400 to 700 mm per year. This type of forest is common in the Northwest part of Gaza and Tete province, which represents the driest part of the country. In Maputo the main dominant type of forestry resources is the open forest and savannah. Some evergreen forest can be observed in Matutuine at Maputo Game Reserve and the Licauti Forest reserve.

Gaza and Inhambane provinces has the same natural vegetation with the main dominant species being mopane (*Colosperum mopane*) associated with other species such as *Kirkia acuminata, Dalbergia melanoxylon, Adansonia digitata, Combretum apiculatum, Combretum imberbe, Acacia nigrescens, and Cissuscornifolia Commiphora spp*. In some parts of Chicualacula and Massagena parte of Inhambane province is mostly a miombo woodland, with high economic value species such as such as *Afezelia quanzensis* (Chanfuta) and others. Limpopo and Banhine National parquea are located in Gaza and the Zinanve National Park in Inhambane.

This vegetation harbours numerous species of wildlife. Due to civil war, illegal hunting depleted wildlife. Community members mentioned the presence of buffalos, elephants and other mammals, which conflicted and competed with humans.

4.2. SOCIO-ECONOMIC ASPECTS OF THE PROJECT AREA

Population

The project will be located in Maputo, Gaza and Inhambane provinces, localities in the southern part of the country. The total population in these provinces and the targeted districts are as following:

Table 5: Population distribution within the targeted districts

	INHAMBANE							GAZA							MAPUTO						
	TOTAL	GOVURO	%	MABOTE	%	FUNHALOURO	%	TOTAL	MAPAI	%	MABALANE	%	MASSINGIR	%	TOTAL	MOAMBA	%	MAGUDE	%	MARRAC	%
Population	1,616,068.00	38,008.00	2.35	54,752.00	3.39	46,482.00	2.88	1,445,896.00	29,621.00	2.05	40,257.00	2.78	38,284.00	2.65	2,216,460.00	102,900.00	4.64	72,364.00	3.26	254,147.00	11.47
Male	756,271.00	17,559.00	46.20	24,314.00	44.41	21,578.00	46.42	657,230.00	13,777.00	46.51	18,832.00	46.78	18,068.00	47.19	1,066,608.00	49,597.00	48.20	33,967.00	46.94	121,431.00	47.78
Famele	859,795.00	20,449.00	53.80	29,433.00	53.76	24,904.00	53.58	788,666.00	15,851.00	53.51	21,425.00	53.22	20,216.00	52.81	1,149,852.00	53,301.00	51.80	38,397.00	53.06	132,714.00	52.22

The selected districts in all provinces are not heavily populated, the population density, with exception of Marracuene and Moamba, is around 2hab/Km^2 . Marracene and Moamba due to its proximity to Maputo City the population density is much higher, about 4% of the total population of the Maputo province live in these districts.. Based on the population Census 2017, the number of female are higher than male, this trend happen in all districts. In the project districts is much lower than the national figures due to immigration of young male to south travel illegal or formal to the South Africa looking for a prosperous future.

Health Water and Sanitation

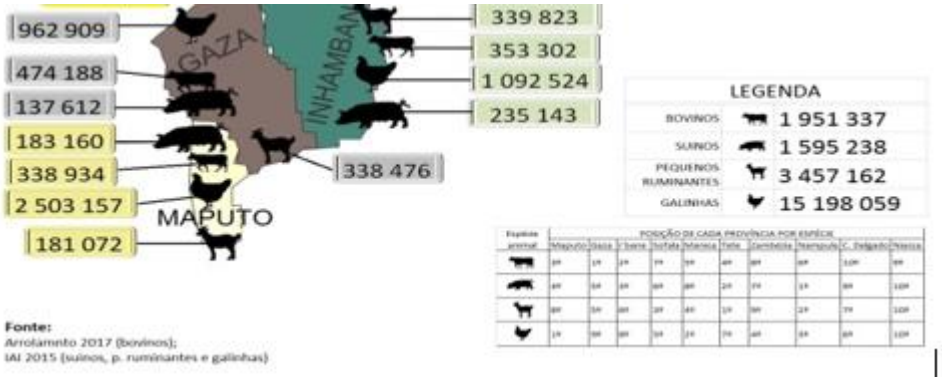
The major causes of morbidity and mortality in Mozambique are malaria, HIV/Aids, tuberculosis and diarrhoea. The prevalence of HIV in the southern provinces accounts for more than 25% including 40% in most vulnerable areas with 30 % of women tested HIV-positive. The HIV/AIDS pandemic is a severe development challenge threatening any effort made to improve the community's living conditions. The project will, in line with the government multi-sector plan, undertake specific interventions to address this challenge.

Access to clean water is an important aspect of human development. The project will provide water harvesting infrastructures that encourage a small holder farming and small-scale irrigation thereby creating jobs and wealth. The project will also promote livestock through the provision of water troughs for animals. Potable water will be provided through boreholes, which will have a positive health impacts. Natural habitats and forest restoration will mitigate positively against the effects of climate change as well as provides some form of income

Economic activities

Agriculture sector dominates the economic activity of the majority of the population in Mozambique. The Southern provinces does not differ from the entire country. The agriculture is

done in a small plots and is rain feed. In the project provinces with the average rain at low than 600 mm/annum, the crop failure is observed annually. Nonetheless, farmers continue to practice it as a copping mechanism for drought with all expected failures. The main subsistence crops in these areas are maize, cassava, cowpea and sorghum. rice and horticulture are which is cash crops. Rice is produced within the existing wetlands and along the rivers. Apart of crop production, within the project provinces, it also produced coconut and cashew nut trees, as well as others fruit trees, giving them more diversified sources of income. And there are also livestock producers , which represents one of the coping mechanisms to drought.



The biophysical and socio-economic characteristics of the population of these selected districts show that water scarcity, and/or reduced commercial formal and informal networking, low level of educational of the population. In these areas the level of poverty is high among the communities due to lack lack of formal employment contribuiting the high level of to the vulnerability of the population. In previous years most of the young male would go to South Africa as a mining employees, but in the last years this opportunity has decrease dramatically and in Gaza province the younger male use to cross the border illegally.

This realitity, associated with the crop failer observed year after year, due to water scaricity, contribute to the increase number of people with food insecurity. In Gaza province, the copping Any effort aimed at poverty and vulnerability reduction of the populations of these communities through livestock production and irrigated agriculture, will only be possible through a rapid development of water harvesting infrastructures.

Gender analyses

The government of Mozambique has introduced significant reforms, including changes to family and land law, to improve the status of women in the country. However, women's position continues to be undermined by discriminatory attitudes and practices, with women getting worse than their male counterparts on wage equality, income, educational attainment and political participation. Poverty in Mozambique has a gendered impact with female-headed households more likely to be in poverty compared to male-headed households. The incidence

of women headed households in Mozambique is 20-25% but it is considerably higher in the program area due to male migration. In the proposed project area, it is probably as high as 30 per cent on average.

Women comprise 51 % of Mozambique's population and about 85% of them live in the rural areas. They represent 52% of the total population that is economically active in agriculture and have a higher adult literacy rate (58.5% versus 29.9% for men), they carry out 80% of the total family farm work and contribute 68% of staple food production. They are mostly involved in agriculture production as well as firewood collection. Areas of major concern with respect to women include excessive workloads, low literacy rates, poor health and nutritional status. The incidence of women headed households in Mozambique is 20-25% but it is considerably higher in the project area due to male migration reaching approximately 30%.

In general women and men are differentially impacted by climate changes in the project areas due to the current power relations and their differentiated roles in these communities. Successive droughts these communities have faced for the last two years has increased men's migration to South Africa, Swaziland and other places in search for jobs. As a consequence, women's role in productive work has increased considerably in the last two years. Women have access to but not control over natural resources and other property rights. Additionally, women do most of the reproductive and part of the productive work, while men are only responsible for productive work. Over 60% of the targeted population for the project are women (including those that heading their own households) who are often the most vulnerable in cases of flood and drought occurrences and have not had equal access to natural resources, credit or extension support in the past, although there are many women trading charcoal. They hold little control over the charcoal benefits and family assets. Traditionally, male family members have always been given preference in inheritance. As the women, in particular the elderly one are the most vulnerable and affected by the drought it is expected that the project will contribute to women's success and wellbeing by improving the productivity and climate resilience of their farming plots and value addition through agro-processing, nutrition and access to markets. The project will be also being targeting vulnerable women to increase their access to inputs, irrigation kits, nutrition training in order to reduce their level of vulnerability.

The region is a long-term supplier of labour to South Africa and young men still regularly travel to in search of work, although demand for labour has declined in recent years (FEWS NET, 2000). This is exacerbated by the high level of AIDS/HIV prevalence in the region. As a result of this out-migration, most families are female headed. These processes resulted in small-scale agriculture in southern Mozambique primarily becoming women's work. The contractors that will undertake development of infrastructure, when procuring labour should take this into consideration, to avoid discrimination against women.

The project activities such as livelihood diversification, agro-forestry and at some extent, the charcoal production technics should target women headed families, as they are in general the most vulnerable to the adverse climate challenges. Is recommended that the PIU stimulate the participation of women in all project activities at least 20% of the project resources and employment be allocate to women.

The project should also encourage women participation in the capacity building activities, including training on management of Small and Medium Enterprises.

5. IMPACT ASSESSMENT AND MITIGATION MEASURES

5.1. METHODOLOGY FOR THE PREPARATION OF THE ESMP

The methodologies adopted in the development of the ESMF include literature review to assess Legal, Policy and Institutional Framework, Risks, Screening and EA, Procedures (Monitoring, Supervision, Audits, Reporting, GRM, etc.). A consultation with key stakeholders, allows to evaluate and assess the environmental and social impacts and mitigation measures of the project, PIU Capacity, ESMF implementation Budget.. This ESMF does not provide site-specific details for the sub projects, as these will be screened to ensure that they are eligible for the project financing and then subject to specific field surveys and EIAs to carried out under the guidance of this ESMF. The generic risk and impact assessment on environmental and social features, at this stage of project preparation was done considering the environmental and social components that are likely to be affected by the Project activities per component.

The impact assessment was done for each component, component 1: will have substantial construction activities (Construction Surface and subsurface water reservoirs, Water Troughs for Livestock, Multifunctional solar-powered boreholes android rehabilitation) and subcomponent 3.3 (agro-processing units), these activities will impose some negative impacts to the environment and socio economic features during the construction phase. Positive impacts are expected to increase during the operation phase with the implementation of the component 2 and 3 (sub component 3.1 and 3.2). So, mitigation measures have to be taken into consideration to avoid negative impacts on the project and enhancement measures to rise the positive expected positive impacts.

5.2. IDENTIFICATION OF IMPACTS

The scale and duration of civil works for construction or rehabilitation of the proposed infrastructure under component 1 and subcomponent 3.3 and ancillary facilities are unknown at this moment. Although the construction of the proposed infra-structures is expected to be of small scale, with exception of the underground water reservoirs. The magnitude and significance of the impacts are expected to be moderate to low.

Direct environmental impacts on physical soil, water etc.) will likely happen due to the excavation and dredging activities, accessing and opening quarries and borrow pits, space for batch plants, work camps, and laydown areas.

Most of these works will generate temporary and localized known construction impacts related primarily to soil movements which may cause air pollution/dust, noise, vibration, and access restriction, improper disposal of construction related waste; temporary pollution of soil and surface waters due to accidental spillage of fuel from construction activities; safety hazards including worker safety; damage to natural habitats, aquatic fauna, or existing vegetation, and impacts to physical cultural resources. Most of these impacts are related to construction activities. The expected impacts should be properly managed during the construction phase by the contractor and closely supervised by the PIU and the supervision engineer.

Considering the dimension of the infrastructures a small to medium size works camps for workers will be needed to accommodate influx workers or job seekers may create minimal conflicts. However, these people bringing economic resources The of communicable diseases, (such as HIV and STDs) or have effects on local commodity prices and commerce in local markets. From the production perspective negative impacts will be expected if agro chemicals are not well managed and the pests increases in the irrigation sites. However, in overall the implementation of the component ii is expected to have more beneficial impacts.

5.3. IMPACTS DURING THE CONSTRUCTION PHASE

5.3.1. POSITIVE IMPACTS

The project will bring a considerable number of positive outcomes from an economic and social point of view. The overall impact of the project implementation is expected to result into positive impacts on the environment as well as for the socio-economic status of the communities in the targeted districts. The project itself aims to increase resilience of the communities suffering from extreme climate condition and disasters In summary the project positive impacts are as follow:

(i) Increase water availability for human and animal consumption in arid and semi-arid zones of Maputo, Gaza and Inhambane provinces;

(ii) Increased agricultural activities that will led to improve agricultural production and productivity;

(iii) Improved food sand nutritional status of the beneficiaries as a result of the increase in the quantity of food produced once the project becomes operational;

(iv) Improved land conditions due to improved land and water management and conservation activities;

(v) Improved soil and water conditions resulting in enhanced land conditions;

(vi) Increased employment opportunities due to increase in economic activities and Capacity building will enhance the knowledge base of the technical officers and local communities hence enhancing their production potentials resulting in improved crop and livestock production.

Employment creation

Employment opportunities will be created during the implementation of the project. During the construction of the infrastructure is expected that temporary employments be created, the number of employment to be created are not yet known, but the contractors will procure non skilled workers in the region, giving therefore opportunities for the young people. A more permanent works is expected to be created for the operation and management of the infra-structures. During this phase a more semiskilled worker will be needed and the project will provide training for them.

Enhancement measures

- The Contractor shall procure 100% of its unskilled workers within the project area and give similar opportunities to women and young people;
- During the operation phase of the food processing unities and water management infrastructure, opportunities shall be given to the women;
- The contractor shall be sensitive to women working condition;
- The contractor is forbidden, under this project, to employ people under 18 years old. In any case this happen the contractor will be prosecuted according to the Mozambique Law.

Improved economic situation and food security

The project is expected to assist famers/ population with new production technology to boost production of commercialized crops and income of the farmers and thus resulting in additional quantity of goods that can be sold at local markets. It is envisaged that increased productivity will help to improve incomes of targeted beneficiaries. With the implementation of component 1 water will be available to irrigate small plots, component 2 create enabling environment for improve production and consumption by providing technical assistance on nutrition, food processing, animal husbandry etc.

Irrigated farms will first reduce the crop failure that accompanies erratic rainfall and also will allow for two seasons of crops, and therefore make more food available for a longer period. From the vulnerability survey carried out by SETSAN (the National Food Security and Nutrition Agency) in 2017 the population in these areas is food insecure for more than 6 months in the year. Interventions on non-ruminants and ruminant animals will also contribute to the reduction in mortality level and decrease of animal weight during the dry season through

the provision of additional feed stocks. It is also expected that better management of the existing grass will result from the reduction of the incidence of wild fires. Intervention on the value chain and market linkages will bring sustainable income alternative for the communities and therefore make them more resilient to adverse climate factors, such as drought.

Additionally, the project will contract local people and the influx workers will procure goods in the areas and also create opportunities for the supply side.

Enhancement measures

- The contractor shall procure goods in the region;
- The workers shall be stimulated to procure goods in the area;
- PIU shall trained the farmers to used water for irrigation;
- PIU shall guarantee crop inputs early to plan correctly the crop season;

Improve water availability

The project selected districts some villages within the project area are located in an area where potable water is scarce due to inexistence of perennial surface water sources in the main part of the districts. The project intervention will create new infrastructure provide potable water to some villages in the targeted districts and contribute to the reduction of water related diseases such as diarrheas and reduce the workload of woman and youth for fetching water.

Additionally, these reservoirs can be used as source of fish ponds and therefore, contribute to the availability of animal protein.

Enhancement measures

- PIU shall assist the communities in water management procedures;
- The communities water management bodies shall design the code of conduct for the water users;
- In a case of fish production, the water managers shall estipulate the fishing season;

Capacity building and awareness

The project under component II will introduce new technologies and equipment's for farmers. Therefore, is expected that farmer's capacity and agriculture services at local level will be improved and strengthened though the provision of material and equipment's. This assistance will improve the ability of farmers to deal with negative impacts of drought and enhance their resilience through the implementation of best practices. Awareness campaigns and dissemination of best practices will contribute to the vegetation, soil and water conservation.

Climate resilient

The project overall objective is reducing the risks of climate-related disasters and their impacts on the livelihoods of the most vulnerable by consolidating financial protection against the risks of climate disasters. Therefore, the project will bring positive impacts for the climate adaption

5.3.2. NEGATIVE IMPACTS

During the project implementation negative impacts may occur due to the construction activities. The project is likely to generate negative impacts during its implementation. These negative impacts will be produced from a number of activities in the infrastructure development and agriculture development components of the project.

Soil degradation (Erosion and pollution)

Soil erosion will occur on the project site due to disturbance of soil strata/structure caused by land preparation and construction activities. The of water harvesting infrastructures (earth dam) will impact on soil resources as it implies soil movements for land leveling, dredging and soil compaction.

Slight risks of salinity are present in most alluvial soils especially in the south mainly because of high evapo-transpiration with low rainfall and the presence of saline and/or sollic lacustrian and estuarine deposits.

The use of heavy machineries and increased traffic during the construction work within the project area is likely to lead to compaction of the soil structure which may lead to reduced soil infiltration capacities and subsequently resulting in increased run-off.
The increased run-off may lead soil erosion and subsequently gully formation. It may also affect soil-water balance and the general hydrological cycle.

Mitigation measures

- Minimize heavy machinery movements and other equipment and away from designated transportation and operational areas;
- Unnecessary vehicular and machinery movements should be avoided as much as possible;
- Reclaim and re-vegetate excavation sites once work is completed to reduce run off;
- Backfilling and compacting excavated areas immediately after excavation to limit exposure of loose soils;
- The contractor should avoid running heavy equipment during rainy season, when opening the earth dam and make the irrigation drainage system;

- To avoid erosion around the small dams the contractors should plant grass and some shrubs that will secure the soil and decrease the run off;
- Constructing retaining walls, in the small dams, to enclose excavated loose soils and ground cuts with steep slopes;
- Planting grass and trees on excavated bare land.

Water quality

The proposed construction activities on water harvesting, farming and processing may affects the quality of existing water resources due to water pollution from hazardous material used for the construction activities (petrol, oil etc.) and wastewater. Some hydrological impacts might occur related with water availability during the dry season. There are some possible negative impacts on reduction of flow with the use of gravity schemes and lowered water table.
Construction of concrete water tanks for water storage (rain water harvesting system) for long periods could develop some anaerobic reaction, which then decreases the quality of water for human consumption. However, due to the small-scale nature of the project and individual schemes that are widely scattered these risks are considered to be minimal.
Pollution could also come from heavy use of agricultural chemicals during the implementation of the project some of which may lead to eutrophication. There will be need to have these well addressed during the project implementation. This aspect will be countervailed by the adoption of conservation techniques.

Mitigation measures

- A clause requiring the contractor to take all reasonable precautions to prevent spillages and leakage of materials with the potential to pollute soil and underground water resources should be included in the contract documentation;
- The contractor shall provide potable water to his workforce during the construction activities and must avoid competing for water with local community, as water is a scare resource in the project area. When possible, the contractor should assist the community, providing water to the more vulnerable people in the event of an emergency situation (no water in the community wells or boreholes);
- Apply soil and water conservation measures to minimize spillage and run-off of chemicals I n waterbodies.
- Cleaning of construction equipment and vehicles shall be carried out in designated service/maintenance areas, which shall be constructed for such purposes by the Contractor. Runoff from such areas shall be discharged in to sedimentation tanks;
- All water and other liquid waste products shall be collected and disposed of at locations on site or off site and in a manner that shall not cause nuisance or pollution;

- Ensure adequate and regular checks on the equipment in use to ensure they are well maintained and in good working condition to prevent leaking oils and fuels;
- Refuelling should be done in safe locations where there is no likelihood of spillages;
- Put measures to minimize leaching and chemical run-off through appropriate soil and water conservation measures.

Air Pollution

Under Component 1 of the project that is focusing on infrastructure development, some earthworks will occur as part of the construction/rehabilitation of irrigation schemes and water harvesting structures in all districts. These activities may contribute to raising the level of dust and noise in the area. Additional sources of air pollution could be expected from the equipment used to construct the irrigation system such as emission of ash, nnoise, dusty and air quality. The construction activities mostly the excavation and transportation of construction materials are likely to generate a significant amount of dust as well as emitting smoke and fumes from engines and oil spills that will lead to pollution of air, water and other environmental resources.

Mitigation measures

- When working close to settlement a care shall be taken to avoid dust dispersion, conducting part of the work when people are not at home. Close to schools the contractor shall watering the soil;
- The contractor shall have provided for washing and as toilets in the vicinity of the works site for construction workers;
- The project implementers shall take all necessary measures to ensure that the operation of all mechanical equipment and construction processes on and off the site shall not cause any unnecessary or excessive noise, taking into account all applicable environmental requirements.
- When operating close to residential and sensitive areas such as nurseries, schools or medical facilities the contractor's working hours shall be limited to daylight hours;
- The workers in dusty areas should be provided with requisite protective equipment such as dust masks and dust coats for preventive and protection purposes;
- The movement and speed of the construction machineries and vehicles should be controlled and properly managed;
- The removal of vegetation should be avoided and denuded surfaces should be adequately re-vegetated;
- Most noisy machinery should be fitted with proper silencers to minimise noise emissions;

- The amount of blasting in the quarries should be controlled where necessary;
- Ensure the construction work takes the shortest time possible, in addition, the activities generating dust should be carried out in calm weather;
- Ensure the noise levels are kept at the minimum acceptable levels and the construction activities are confined to the working time limits.

Vegetation Loss

The project implementation will result in limited level of vegetation clearance increases as more land is brought under cultivation. There is anticipated increase in clearing of vegetation through the process of expanding land for irrigation agriculture, construction of earth dams, construction of market infrastructure, livestock infrastructure. The clearing of vegetation and the subsequent loss of habitat is likely to lead to loss of biodiversity especially of organisms that are prevalent in the micro-areas.

However, the crops will also result in some level of vegetation cover on a seasonal basis. As mentioned earlier livestock can be considered the most important economic feature of the communities of the northwestern region of Maputo and Gaza provinces. Grass is the main animal feed source during the rainy season when there is enough grass for animals. The grassland is very often mixed with trees and shrubs, and the area of grassland is dependent to a large degree on the crown cover of trees and shrubs. Additionally, shrubs and trees provide some feed, particularly for goats, and to a lesser extent for cattle when grass forage is in short supply. However, during the dry season the grass becomes dry and highly inflammable, so when a bush fire occurs the entire animal feedstock may be lost. Many people in these districts are aware of the need of the dry grass for animal feeding. Thus, a bush fire in these districts is forbidden and everyone who causes a fire should be legally reprimanded. The other main issues other than feed associated with livestock are the shortage of water especially in the dry season. The project will address some activities to prevent from wildfires.

Mitigation measures

- Where possible, clearing of vegetation, particularly of indigenous trees needs to be avoided as much as possible during construction, and the clearing needs to be carried out only where necessary;

- where clearing is done, land should be landscaped and reclaimed by planting more trees and other forms of vegetation;

- where erosion may occur due to vegetation loss, erosion control measures need to be put in place

- avoid clearing and construction within key sensitive habitats such as wetlands, culturally protected areas, unique and special habitats; and (ii) where possible, buffer the special, sensitive and ecologically important habitats.

Solid Waste management

During the construction phase heavy equipment will be used and some potentially hazardous waste such as diesel and oil will be stored in the project area. The contractors undertaking the works will need to ensure safe storage of the products and adequate disposal of any waste. During the operation phase crop production systems will be using fertilizer and pesticides which if not well stored can be harmful for members of the community. These products if not well applied can contaminate soil and water courses (surface and ground water). The safe storage of fertilizers and pesticides will be ensured through the extension workers and the Project management team at the Provincial Agricultural Directorate. The extension workers will also conduct training and sensitization exercises on fertilizer and pesticide use and application to minimize the risk of soil and water contamination. Generation of wastes due to processing: value addition of agricultural produce will result in generation of both solid wastes and wastewater which may have negative impacts unless properly managed.

Mitigation measures:

- Put in place appropriate waste management mechanisms for both solid and wastewater;
- Educate and sensitize the population on being mindful of and responsible for their own environments.
- The Contractor shall be required to prepare and submit a Plan for waste control and management onsite to the supervisor/engineer for approval.

- The Contractor should include in the waste management plan, at least the following:
    - Sufficient containers (preferably resistant to worms and appropriate for the weather conditions) on the work sites for the disposal of solid waste produced daily;
    - Collection of rubbish and waste generated daily by the staff;

- Care will be taken when handling pesticides through the provision of adequate training to the operators in order to avoid contamination of soil and water;

- The pesticides which will be used on the leafy vegetables will be of natural origin and do not include an active ingredient of any toxic nature, while fungicides that will be used are extremely safe according to international standards. Although the insecticides to be used are slightly more toxic, they break down rapidly in the environment into harmless products and are virtually ineffective within four weeks.

Land and Property Acquisition, Compensation, Resettlement

The implementation of the construction activities expected to have any impact on land acquisition. In any case that land is required the following provision shall be done.

Mitigation measure

- Develop and Implement Resettlement Action Plan for the subprojects requiring resettlement and including the GRM and ensure its implementation.
- Minimize relocation by siting detour, camp sites, quarries, borrow pits, buildings and infrastructure away from highly populated areas.
- Carry out sensitisation meetings on planned project activities and likely impacts including loss of land/property.
- Develop and implement livelihood restoration Plans for the affected people.
- Minimize resettlement by reducing the right of way (RoW) for road rehabilitation subproject.

Health and safety

Implementation of project can pose some risks to the safety of the workers and others around the project area. And part of the activities can bring hazards that decrease the quality of health of workers. Specifically, occupational health and safety issues during construction and operation of the water infrastructures and agroprocessing, include the following: **Physical hazards:** Physical hazards represent potential for accident or injury or illness due to repetitive exposure to mechanical action or work activity. It may also be happening when operate processing equipment. Single exposure to physical hazards may result in a wide range of injuries, from minor and medical aid only, to disabling, catastrophic, and/or fatal. **Chemical hazards**: Chemical hazards represent potential for illness or injury due to single acute exposure or chronic repetitive exposure to toxic, corrosive, sensitizing or oxidative substances. They also represent a risk of uncontrolled reaction, including the risk of fire and explosion, if incompatible chemicals are inadvertently mixed. **Working at Heights:** Fall prevention and protection measures should be implemented whenever a worker is exposed to the hazard of falling more than two meters;

into operating machinery; into hazardous substances; or through an opening in a work surface. Fall prevention / protection measures may also be warranted on a case-specific basis when there are risks of falling from lesser heights.

Mitigation measures

- Before commencing work, the Contractor will be required to identify potential hazards for each work task;
- Provisions for emergency responses are to be included in the Contractor ‘s site safety plan which is to include nomination of a person who will be immediately contacted in case of an accident occur;
- Develop a disciplinary policy, for example, progressively (oral, written warning, suspension and dismissal of the worker);
- All the workers must sign the Code of Conduct;
- The Contractor must have / define its Occupational Health and Safety Policy;
- The contractor will be required to keep the site free of drugs and alcohol;
- The contractor ‘s site safety plan will include provision for a safe work environment and provide safety measures, training and protective equipment to all workers including hand, head, eye and ear protection and safety footwear;
- All workers shall be provided with PPE (Personal Protective Equipment);

- Designing machines to eliminate trap hazards and ensuring that extremities are kept out of harm’s way under normal operating conditions;
- Turning off, disconnecting, isolating, and de-energizing (Locked Out and Tagged Out) machinery with exposed or guarded moving parts;
    - All chemical products shall be stored in proper area and shall be marked with warning signals;
    - Storage of chemicals shall not be accessible for strangers;
    - Keeping the number of employees exposed, or likely to become exposed, to a minimum;

- When working in high the contractor shall install the guardrails with mid-rails and toe boards at the edge of any fall hazard area;
- Proper use of ladders and scaffolds by trained employees;
- Appropriate training in use, service ability, and integrity of the necessary PPE;
- Inclusion of rescue and/or recovery plans, and equipment to respond to workers after an arrested fall.

Health and Sanitation

Health and safety of workers and other people around the project shall be one of the most important aspects to be considered by the contractor. The project will be implemented within area that is endemic to Malaria and HIV/AIDS. The spread of HIV/AIDS is likely to increase, especially during infrastructure development and construction, when workers from outside the region are brought into to it to live for long periods without their respective spouses. During the project cycle interaction with external workers with local women could be an open door for HIV/AIDS and/or ISTs propagation, especially among poor households, women and a younger generation often used as sex-workers to be self-sustained or sustain their families. Nowadays, COVID-19 pandemic brings additional treat to health. Therefore, the shall adopt some procedures to help reduce the risk of exposure to the coronavirus.

Mitigation measures

- The contractor shall implement protective measures to control malaria within the camping site for example: Malaria spraying, avoid having stagnant water, so on.
- Contractors should develop and implement an HIV/AIDS-IST prevention plan, which should include the training as an awareness raising campaign of their workers and the surrounding communities.
- Provide treatment for workers who are infected.
- Provision of sufficient, good quality and free condoms.
- The Contractor shall provide supply of running water for its workers, wash water, water for toilets.
- For COVID 19 protective measures, the Contractor shall implement a COVID protocol, which shall include the following:
    - Provision of 3 disposable musk per day;
    - Not allow handshake among its workers;
    - Mantain social distance always possible;
    - Encourage respiratory etiquette, including covering coughs and sneezes.

Community Health and Safety

Community health and safety issues during construction of water storages facilities s including agro-processing facilities and the production of annual crops may arise due water pollution (decrease water quality, air and soil, as well as changes in land use or to the loss of natural buffer areas (upland forests that mitigate the effects of natural hazards, such as flooding, landslides, and fire). These impacts may result in increased vulnerability and community safety-related risks. The project implementation may also contribute to spread of communicable and non-communicable disease (ITS, COVID-19 among others). The reduction or degradation of natural resources may result in health-related risks and impacts. Hazardous products, including

pesticides which may be used under component 2, may affect community health in the same ways that they affect individual operators: through dermal contact, ingestion, or inhalation of harmful products or chemicals. The pesticides will not be financed but will be used because some agriculture practices to be implemented under this project.

Mitigation measures

- Information campaigns on STDs among the workers and local community;
- Education about the transmission of diseases;
- All Contractor, Subcontractor and Engineer Workers must implement social distancing by maintaining a minimum distance 1.5 meters from other worker;
- Reduce to minimal the face to face meetings, critical situations requiring in-person discussion must follow social distancing and the number allowed by the law. meetings in open space must be considered.
- Locate campsite away from sensitive sites like villages.
- Support health agencies and their response planning to prevent Emerging Infectious Diseases, such as COVID-19, diarrhoea, etc.
- Quarries in the proximities of settlement must not be used (less than 500 m).
- Competition over water use due to influx of workers in the area, and due to the construction activity must be minimized.
- Neighbouring sensitive land users are informed of unusual events or problems that may affect amenity, how long the impact will go on and the actions initiated to mitigate the impact.
- Watering soil/sands on windy days to avoid dust over the population.
- Risk of exposure to hazardous products can be minimized by following guidelines for the transportation, storage, handling, usage, and disposal of those products.
- Avoid burning of residual crop and other wastes, which creates harmful air emissions that may adversely impact surrounding communities.

Increased risk of GBV and SEA

The implementation of the project will likely result to influx of people in the construction sites resulting in potential for Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA). The influx workers, because they are far from home and need to socialize, may hasten the introduction and/or increased expression of vices such as prostitution, gambling, alcoholism, and drug use, which can have significant negative social impacts and consequences. Increase in disposable income for workers and communities working the project could also result to

GBV/SEA incidences. Such incidences may arise in situations where large numbers of contractor workers interact with poor communities, where household representatives that receive project benefits are forced to surrender the cash to spouses, where benefits may be used to lure adolescents into unsafe sexual practices, or in cases of forced sexual relationships in return for favours. The community dialogue and awareness raising will be carried out in the communities to make sure people potentially affected by the project identify the different entry points to the referral pathway if they are victims of SEA (including specifications about the role of the GRM).

Mitigation measures

The contractor is required to:

- The contractor shall develop and implement the project's Codes of Conduct (COC), GBV Action Plan, Grievance Redress Mechanism (GRM) and implement accordingly throughout the project implementation period and respective penalty policy, as mentioned subchapters above.
- The contractor shall prepare a C-ESMP that includes a detailed GBV Action Plan t; identify and map locations of high risk, such as major prostitution areas;
- identify and map entities that receive GBV victim complaints; identify and map entities that provide support to GBV victims and appropriate mitigation actions under the C_ESMP;
- All employees shall attend an induction training course prior to commencing work on site to ensure they are familiar with the Contractor's commitments to the project's Codes of Conduct, ESMP, and other standards, such as ESHS and OHS standards,
- All employees should sign the project's 'Individual Code of Conduct' confirming their agreement to comply with ESMP measures. This sets stringent standards for personal behaviour by those working on the project so as to avoid GBV, SEA, VAC, and workplace sexual harassment.
- Establish and operationalize GRM whose approach is sensitive to issues of GBV and SEA.
- Information and awareness raising campaigns for community members, specifically women and girls.
- Provision of information to host community about the contractor's policies and Worker Code of Conduct (where applicable).
- Provision of cultural sensitization training for workers regarding engagement with local community.

- Consultations with and involvement of local communities in project planning and implementation.
- Awareness-raising among local community and workers.

Establishment and operation of a camp site

work will result in influx of labour outside from their original area. Therefore, the contractor must accommodate them within the project area.

Mitigation measures

For that the contractor shall avoid:

- To locate the camp within community settlements
- To establish working camps within forested area or within conservation area.
- To do a clear cut of natural vegetation for site establishment.

The contractor shall submit to approval of the consultant:

- The OHS Policy and for Campsite Plan.
- Workers Code of Conduct.
- Camp site layout and details of the proposed measures to address adverse environmental impacts resulting from its installation.
- Layout of equipment maintenance areas and lubricant and fuel storage facilities including distance from water sources.
- Sewage and wastewater management plan for provision of sanitary block to prevent pollution of watercourses.
- Detailing the means by which local people and other project affected persons (PAP) can raise grievances arising from the construction and rehabilitation process and how these will be addressed (e.g., through dialogues, consultations, etc.)
- Penalty Policy, for worker non-compliance.

Influx workers and employment

The rehabilitation and construction phase will generate a number of short-term job opportunities for the local people, as well as new opportunities to improve livelihoods for local communities and reduce poverty. If adequate measures are not put in place, there will also be some potential negative socio-economic impacts, especially related to loss of land through the wrong selection

of investors (land-grabbing) and loss of land and property as a consequence of involuntary resettlement.

There is also a potential risk to the disturbance of physical cultural resources, due the construction and rehabilitation of roads and border post buildings, including agriculture facilities and the potential negative impact of the influx of external workers, including foreign workers. This could be potentially associated with social problems such as the loss of houses and structures on the land, increase of demand on local facilities (health, water supply, so on), and the potential negative impacts on livelihoods of the communities who lived on the land or used it for cultivation. The increase volume of traffic and higher risk of accidents, increased risk of spread of communicable diseases, and increased rates of illicit behaviour and crime are the other impacts. Without clear criteria and communication local people might look at the hiring of external work force as unjust and detrimental to their immediate interest. This has the potential to cause conflicts and disruptions, including violence, such illicit behaviour or crimes can include theft, physical assaults, substance abuse, prostitution and human trafficking. Local law enforcement may not be sufficiently equipped to deal with the temporary increase in local population.

Mitigation measures

- Share the workers required for the project locally (especially unskilled staff);
- Mandatory and regular training for workers on required lawful conduct in host community and legal consequences for failure to comply with laws;
- Develop more specialized instruments, such as a site-specific Labour Influx Management Plan and/or a Workers' Camp Management Plan;
- Allocate the camp site in a remote area;
- Set a compulsory Code of Conduct for workers, stick with illicit behaviour and other important rules, with respective Penalty Policy;
- The contract shall avoid being accused of Children Abuse and Exploitation by implementing the following measures:

    - Avoid employing under aged (less than 18 years) workers and this should be included in the Contractors Code of Conduct.
    - Take strict measures against employment of children.
    - Use National IDs to verify age of employees.
    - Learners should not be engaged in any construction related activities; and
    - Conduct community sensitizations on child labour.
    - Work closely with local authorities to stop recommending underage children for the project construction works.

- Train local workers within a reasonable timeframe to meet project requirements, especially for operation and maintenance phase;
- Sensitization campaigns both for workers and local communities;
- Establishment of a Grievance Redress Mechanism (GRM) for workers and host community to report workers' misconduct and complaints/reports on gender-based violence or harassment through the GRM;
- Monitoring and supervision, and, as needed, adaptive management actions;
- Provision of opportunities for workers to take advantage of entertainment opportunities away from rural host communities.

Pesticide Use and Management

Expected Investments under component 2 may result in a use of pesticides for the pest control at farm level (crop and as well as at the storage facility and processing infra-structure). The general use and management of pesticides including transport, storage and re-use by women and illiterate people can be associated with a multitude of risks to the users themselves and the social and natural environment. The management measures foreseen in the IPM, which as to be done for each subproject of the component three and has to apply the IFC EHS guideline for agrochemical management.

Insects, weeds, pathogens and other pests are a fact of agricultural life. They thrive on a concentrated and reliable food source and unfortunately, the measures commonly used to raise productivity of crops (e.g., monoculture with high-yielding varieties, multiple cropping with reduction or elimination of fallow periods, use of fertilizers, etc.) create an even more favorable environment for pests. Therefore, knowledgeable management of pest problems is required in any effective agro-system.

Mitigation measures

- All agricultural chemical used on farm are register for appropriate use by or allowed to be used subject to a permit;
- Chemical records, covering the purchase or procurement of chemical and details of their application has to be maintained for a period of at least three years.
- All persons applying chemicals on the farm have to be trained in the use of chemicals.
- Veterinary medicines used have to be appropriate for the identified problem, are used according to label instructions, are within the expiry date and have been stored correctly from purchase to use.
- Implementation of an integrated pest management program have to be considered.

- The target pest, disease or weed has been correctly identified, and an appropriate chemical, application rate and application method are being used.
- Veterinary medicines used have to be appropriate for the identified problem, are used according to label instructions, are within the expiry date and have been stored correctly from purchase to use.
- Implementation of an integrated pest management program have to be considered.

Climate Change

Climate change has result in more intense and frequency of the extreme weather events in the last decades. A combination of increased hot days and precipitation weakens the agriculture production, the communities to survive need to adopt an adaptation and coping mechanisms. the project area are crossed by international rivers (Incomati, Limpopo and Save rivers). For agriculture activities drought and flooding are the most stressing events, which results in crop failures. Flood and drought are cyclical observed the project area. Apart of the losss on the agriculture production, these climatic events affects the duration of the infra structure to be constracted.

Mitigation measures

- Adopt climate resilent procedures and material to construct dikes to protect the costal line from wind, cyclones and storms;
- Investments in climate resilience agricultural infrastructure such storage facilities for commodities susceptible to climate hazards In addition to water management and drought resistant techniques.
- provide technical support to farmers on smart agriculture and productivity enhancement.
- For irrigation schemes, placed the irrigation equipment in a location that can be protected from flood;
- Adpopt irrigation equipment, agroprocessing equipment, water pump that are energy saver;
-
- Tree and grass planting for roadway reserve protection and slope stabilization will be used thus contributing GHG emissions reductions.

5.4. PROJECT IMPACTS FROM OPERATIONAL PHASE

Flora and Fauna degradation

The implementation of the project does not expect to increase the clearance of the vegetation. However, the project area is alredy heavily exploited for charcoal and fire wood production (Maputo and Gaza) and Timber in Inhambane. Project implementation may facilitate access to the natural forest area and therefore exposing areas for forestry exploitation and animal hunting (legal as well as illegal).

Mitigation measures

- Planting adjacent areas of the constructed areas and other public areas in consultation with local people can help to support local flora and fauna and reduce Greenhouse gas emission, measure to be monitored in the ESMPs.
- PIU shall closely coordinate with Forest Office and its outlets to control illegal poaching and trapping by the project stakeholders or other outside wildlife poachers, wildlife traders and timber smugglers.
- Stepping/stopping vehicles over vegetation is prohibited.
- Adverse effects on green cover within or in the vicinity of the construction site shall be minimized. For each tree felled, 3 trees must be planted, as a compensation to out-weight CO2 emissions and promote biodiversity and ecosystem services.
- Landscaping (greening) of the border post area shall avoid introduction of exotic vegetation (mostly invasive species), in any case that exotic species must be introduced a risk analysis shall be taken.

Soil

Soil erosion may occur due to the weak road maintenance and also due to the impacts of climate changes, as well as the removal of vegetation cover in the margins of the roads.

Mitigation measures

- Grass cover slopes and graded grounds, and protect livestock grazing at road shoulders and embankments

- Control traffic accidents and transportation of hazardous chemicals
- Rake or loosen all compacted ground surfaces
- Placing no-climb signs on the dunes
- Establishment of local team for culvert and other drainage infrastructure clean up in regular basin (from siltation, trees etc.) to maintain the normal flow of water
- Increase frequency of maintenance/cleaning Drainage System (particularly on Roads)
- Increase height of the road platform (this is a Preconstruction measure, for Road Detailed Design stage)

Water contamination

During the operation phase impacts on water quality is unlikely to happen. however, if in any case it occurs the ESMP is proposing the following mitigation measures:

- Oil spills and vehicle leakages shall be minimized through regular monitoring and supervision, annual checking of vehicle conditions;
- Access to the reservoir shall by animals shall be proibites;
- Borehole shall be fenced to avoid access for non authorized people;
-
- Regularly maintain plumbing, and identify and repair leaks
- Shut off water to unused areas;

Occupational health and safety

During operation phase occupational health risks may occur. The operation irrigation scheme, water pumps all equipment that will require energy, can cause injuries during equipment maintenance.

Agroprocessing factories may result in some risk to the workers, due to exposition of high noise equipments and to some use of cleaning products. Under this ESMP is proposed the following measures that shall be considered during the building construction to be operational when the new facility is operating.

Mitigation measures

- Agroprocessing infra-structure management shall provide space for each worker, and in total, that is adequate for safe execution of all activities, including transport and interim storage of materials and products;

- The buildings shall have emergency always exits unobstructed;
- Exits should be clearly marked to be visible in total darkness;
- The emergency number and capacity of emergency exits should be sufficient for safe and orderly evacuation of the greatest number of people present at any time, and there should be a minimum two exits from any work area;
- An assembly point shall be marked and known by all workers;
- The workplace should be designed to prevent the start of fires through the implementation of fire codes applicable to industrial settings;
- Equipping facilities with fire detectors, alarm systems, and fire-fighting equipment

5.5. CUMULATIVE IMPACTS

The sub-project sites will be sceened for cumulative impacts, although is not expected that this new project compete with the previous one, as the districts select other communities, not closed to the previous. But the lesson from the previous project will be used to upscaling the new project achivements.

The Bank has recently funded a number of Project interventions in support of the agriculture and rural development sector in Mozambique, namely: i) The Post Cyclone Idai Emergency Recovery and Resilience Program; ii) the Drought Recovery and Agriculture Resilient Project; iii) the Value Chain and Youth Empowerment; iv) Project Baixo Limpopo Irrigation and Climate Resilient project (BLICR): v) the Massingir Dam and Smallholder Rehabilitation Supplementary II Project; vi) the Sustainable Land and Water Management Project (SLWRMP); and vii) The Emergency Humanitarian Relief Assistance Related to the 2019 Cyclone. From the above list, only the Sustainable Land and Water Management Project and the Massingir Dam Emergency Supplementary II Project have been closed. Therefore, lessons from the previous projects were used to leverage the impacts of this project. Main lesson is how to address the inter-linked challenges of adverse impacts of climate change, rural poverty, food insecurity and land degradation, and provided climate resilient (CR) infrastructure for increased agricultural productivity respectively; the technologies and methods successfully implemented will be adapted to the new project context.

Table 6:Environmental and Social Management Matrix (summary)

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
Site preparation and in depth survey define the suitable area for construction and drilling	Identification of the necessary requirement	To fulfil the requirements under the Mozambican law	• **Measure 1:** Desk study and initial visits; • • Contract signed • • Paperwork (license for construction); •	Contractor Client Contractor	Study done
Water quality control	Water contamination	To avoid impact on health issues	• A clause requiring the contractor to take all reasonable precautions to prevent spillages and leakage; • The contractor shall provide potable water to his workforce during the construction. • When possible, the contractor should assist the community, providing water to the more vulnerable people; • Apply soil and water conservation measures to minimize spillage and run-off.	Contractor Supervision	Water quality control measure at each borehole need to be in place for human consumption

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			• Cleaning of construction equipment and vehicles shall be carried out in designated service/maintenance areas; • All water and other liquid waste products shall be collected and disposed of at locations on site or off site; • Ensure adequate and regular checks on the equipment in use to ensure they are well maintained to prevent leaking oils and fuels; • Refuelling should be done in safe locations where there is no likelihood of spillages; • Put measures to minimize leaching and chemical run-off.		
Soil conservation and quality	Erosion and soil contamination	To avoid loss of soil	• Unnecessary vehicular and machinery movements should be avoided as much as possible; • Reclaim and re-vegetate excavation sites once work is completed to reduce run off;	Contractor Supervising consultant	A waste management plan of the camp and work sites Toilets with septic tank, Drainage system in place Storm water drainage

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			• Backfilling and compacting excavated areas immediately after excavation to limit exposure of loose soils; • The contractor should avoid running heavy equipment during rainy season; • To avoid erosion around the small dams the contractors should plant grass and trees to cover the soil and decrease the run off; • Constructing retaining walls, in the small dams, to enclose excavated loose soils and ground cuts with steep slopes; • Planting grass and trees on excavated bare land.		system established
Air Quality	Noise and dust pollution	To decrease/mitigate level of noise and dust in the air	• All workers working in very polluted environment shall be provided with protective equipment; • Avoid any excessive nuisance to the community and wildlife due to the operation of machinery during night time;	Contractor Supervising consultant	Measure levels of dust and noise (if possible) Visible and hearing verification; Number of PPE distributed

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			• When operating machinery close to residential area and sensitive areas the Contractor's working hours shall be limited to daylight hours		
	Loss of vegetation		• Where possible, clearing of vegetation, has to be avoided as much as possible; • Where clearing is done, the contractor shall replant, per each tree cutted 3 shall be planted; • Erosion control measures need to be put in place; • avoid clearing and construction within key sensitive habitats.		
Waste management			• Before commencing work, the Contractor will be required to identify potential hazards for each work task. • Provisions for emergency responses are to be included in the Contractor 's		

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			site safety plan which is to include nomination of a person who will be immediately contacted in case of an accident occur. • Develop a disciplinary policy, for example, progressively (oral, written warning, suspension and dismissal of the worker). • All the workers must sign the Code of Conduct. • The Contractor must have / define its Occupational Health and Safety Policy. • The contractor will be required to keep the site free of drugs and alcohol. • The contractor ‘s site safety plan will include provision for a safe work environment and provide safety measures, training and protective		

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			equipment to all workers including hand, head, eye and ear protection and safety footwear. • All workers shall be provided with PPE (Personal Protective Equipment). • Designing machines to eliminate trap hazards and ensuring that extremities are kept out of harm's way under normal operating conditions. • Turning off, disconnecting, isolating, and de-energizing (Locked Out and Tagged Out) machinery with exposed or guarded moving parts. • All chemical products shall be stored in proper area and shall be marked with warning signals. • Storage of chemicals shall not be accessible for strangers. • Keeping the number of employees exposed, or likely to become		

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			exposed, to a minimum. • When working in high the contractor shall install the guardrails with mid-rails and toe boards at the edge of any fall hazard area. • Proper use of ladders and scaffolds by trained employees. • Appropriate training in use, serviceability, and integrity of the necessary PPE. • Inclusion of rescue and/or recovery plans, and equipment to respond to workers after an arrested fall.		
Occupational Health and safety	Health and social cohesion	To minimize outbreak of infectious diseases and conflicts between workers and the	• Share the workers required for the project locally (especially unskilled staff); • Mandatory and regular training for workers on required lawful conduct in host community and legal consequences; • Develop more specialized instruments, such as a site-specific Labour Influx Management Plan and/or a Workers'	Contractor; Supervising Consultant	Number of condoms distributed;Number of awareness promotion sessions

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
		community	Camp Management Plan; • Allocate the camp site in a remote area; • Set a compulsory Code of Conduct for workers with respective Penalty Policy; • The contract shall avoid being accused of Children Abuse and Exploitation; • Train local workers within a reasonable timeframe to meet project requirements; • Sensitization campaigns both for workers and local communities; • Establishment of a grievance redress mechanism (GRM) for workers and host community; • Monitoring and supervision, and, as needed, adaptive management actions.		
Gender Biased Violence (GVB)			• The contractor shall develop and implement the project's Codes of Conduct (COC), GBV Action Plan, Grievance Redress Mechanism (GRM) and implement accordingly; • The contractor shall prepare a C-ESMP	Service provider; Contractor/ engineer	Number complaints received; Number response given to the victims;

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			that includes a detailed GBV Action Plan; • All employees shall attend an induction training course prior to commencing work on site; • All employees should sign the project's 'Individual Code of Conduct' confirming their agreement to comply with ESMP measures; • Establish and operationalize GRM whose approach is sensitive to issues of GBV and SEA; • Information and awareness raising campaigns for community members, specifically women and girls; • Provision of cultural sensitization training for workers regarding engagement with local community; • Awareness-raising among local community and workers.		

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
Community health	Project interference with community	Avoid community problems	• Information campaigns on STDs among the workers and local community; • Education about the transmission of diseases; • All Contractor, Subcontractor and Engineer Workers must implement social distancing by maintaining a minimum distance 1.5 meters from other worker; • Reduce to minimal the face to face meetings; • Locate campsite away from sensitive sites like villages; • Support health agencies and their response planning to prevent Emerging Infectious Diseases, such as COVID-19, diarrhoea, etc. • Competition over water use due to influx of workers in the area, and due to the construction activity must be minimized.		

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
			• Neighbouring sensitive land users are informed of unusual events or problems that may affect amenity; • Watering soil/sands on windy days to avoid dust over the population. • Risk of exposure to hazardous products has to be minimized; • Avoid burning of residual crop and other wastes, which creates harmful air emissions that may adversely impact surrounding communities.		

Environmental and Social Management Plan					
Environmental and Social Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Pre-construction and Construction Phase					
Influx workers and employment			•	Contractor Contractor and community leaders Contractor Contractor	Number of local people employed Number of local women employed Salaries paid Local providers contracted Orders placed with local businesses Local businesses selling to contractor Ablution facilities Skips and garbage bins at site Time table and name of refuse collectors

Environmental Management Plan					
Environmental Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Operation Phase					
Water	Water contamination	To avoid impact on health issues	• The project M&E team shall control the water quality in the reservoir and irrigation channels; • A water quality control and treatment should be maintained in all boreholes for human consumption for the entire life cycle of the project	SDAE and Community members	Water quality – see table 4 for quality parameters
Soil and underground resources	Erosion and soil contamination	To avoid soil erosion	• Maintain operational drainage system • Maintain landscape around the dam; • The agriculture soil preparation • Training and education on infrastructure management and SME's management • best uses of input (pesticides and fertilizers)	PIU, SDAE	Waste collection and ablution facilities in place

Environmental Management Plan					
Environmental Impacts	**Issues**	**Objective**	**Enhancement/Mitigation**	**Responsibility**	**Indicators**
Operation Phase					
Environmental best practices (farming, etc.), awareness campaigns;	Improve forest quality Improve production	To reduce the level of biodiversity loss;	• Conservation agriculture • Natural resources management messages • Introduction of new crops and varieties	SDAE PIU	
Control water and soil quality	Water quality	Avoid reduction of water quality	General quality parameters for soil and water: pH Dissolved Oxygen Total Dissolved Solids Conductivity Turbidity Temperature Oxidation Reduction Potential Nutrients Control of input uses (pesticides and fertilizers)	PIU (INGC), DPTADER	Sampling stations: 1 in an area directly influenced by the project and one in a nearby location not affected directly by the activities

6. PUBLIC CONSULTATION

A consultation process is a requirement during the preparation of any safeguards instruments, this aim to engage local key stakeholders and involve them in the revision of the draft findings of the ESMF. The consultation process of this ESMF, due to COVID 19 pandemic restriction, adopted a mixed option for consultation. Consultation process during the preparation of the safeguard instrument is a requirement of the Government of Mocambique under thePublic consultation Directives and Bank for due diligence as required in the ESIA .

The purpose of consultations was: (i) to generate a good understanding of the project by all stakeholders; (ii) to enhance ownership of the project by local leadership, the community and local farmers; (iii) to understand people's and agency expectations about the project; (iv) to understand and characterise potential environmental, social and economic impacts of the project; (v) to enhance local benefits that may accrue from the project; and (vi) to enable stakeholders involved in the project to provide views, hence participating in or refining project designs. In addition, site-specific investigations were also conducted to gain insight to the likely impacts of the programme on the environment.

The consultation process was implemented at the early stage of the project through the Bank officials' visits to the targeted districts with local authorities. Environmental implications and base line information were discussed with INGD, project staff team and provincial levels during project preparation and field missions. Additional meetings were done, based on recommendation given by INGD, the consultion was done in one district/province. The districts were selected by INGD, the public consultation in the field was done following plan:

Provinces	**District**	**date**
Maputo	Marracuene (	15/03/2021
Gaza	Guija	09/03/2021
Inhambane	Mabote	11/03/2021

The meetings were attended by 20 people, following the COVID 19 restriction in the country. The members of the communities in all location welcomed the project and referred to their main problems. The consultations also allowed the team to capture the communities' concerns and expectations for the identification of the environmental issues and evaluation of the magnitude and significance of the potential impacts of the project, which were discussed earlier.

One of the problems that the communities referred in all location is the water provision, agriculture failure and shortage of inputs (such as seed), from the social perpective unemployment is the major problem.

The views and comments of the public have been incorporated, to the extent possible and are likely to influence the design as well as the locations of the proposed projects and infrastructure development. In addition, relevant Acts and regulations, AfDB guidelines, national policy papers, national statistics, relevant reports and documents (see list of references) were collected and reviewed. Relevant information to constitute an environmental baseline for impact identification and assessment has been obtained from these published sources.

7. MONITORING AND REPORTING

Monitoring is the long-term process that normally begins at the start of the project and should continue throughout the life of the project. Its purpose is to establish benchmarks so that the nature and magnitude of anticipated environmental and social impacts are continually assessed. Therefore, monitoring involves the continuous or periodic review of mitigation activities to determine their effectiveness.

The overall objective of environmental and social monitoring is to ensure that mitigation measures are implemented and are effective. Environmental and social monitoring will also enable response to new and developing issues of concern during the project implementation and, therefore, it will ensure that project activities comply with and adhere to environmental provisions and standard specifications of the Bank and the Government of Mozambique. The overall responsibility of the environmental and social monitoring will lie with INGC (PIU) in close conjunction and collaboration with the MTA/DPDTA and the African Developing Bank, the financing agency. INGC (PIU) shall employ an d environmental experts to overseen the ESMP. Good number of key staff involved in the implementation of the project may require on-site-training to enhance their ability on various environmental aspects and reviews, including monitoring and compliance which will be helpful in handling environmental and social aspects of the project. The whole exercise of ESMP monitoring will involve monitoring compliance with regulations, managing worksites, executing specific environmental and social works and seeking solutions to emerging environmental problems. The ESMP monitoring team will ensure regular reporting, depending on the aspects being monitored to avoid any serious environmental consequences.

The day-to-day monitoring process at the site will be done by the Environmental and Social officer of the engineer (supervisor), a representative of INGD at the local level. For component 1 and 2 (construction activities), the contractor shall submit a monthly report for approval by the supervisor (engineer) and presented to the site monthly meeting. PIU at the national level has to submit to the approval of the African Bank a quarterly and annual report on safeguards issues, implemented by the contractor under the supervision of the Engineer.

INGD will establish and supervise, with the responsibility given to the INGD delegation, a monthly site meeting. The site meeting will be attending by therepresentative of the stakeholders ate te site, which shall include any service provider, representative of the national coordination body led by INGD, INGD Delegation. Under COVID-19 a physical participation of PIU

members and the representative of the funding agency may be reduced, and virtual participation will be crucial. Thus, the INGD representative at the provincial level will have the responsibility to organize the meeting and make sure that all the participants are informed well ahead. During the site meetings implementation aspects of the project will be discussed and all matters of community concern not resolved should be given a solution. The monthly report should include at least information on the CESMP implementation, conflict resolution/GRM, OHS, HIV, GBV, and CAE reports.

Compliance monitoring comprises on-site inspection of activities to verify that measures identified in the ESMP are being implemented.

This type of monitoring is like the normal tasks of a supervising engineer whose task will be by contractual arrangement to ensure that the Contractor is adhering to the contractual obligations regarding environmental, social (GRM and GVB, etc.), health and safety practices during construction, as prescribed in the Environmental and Social Clauses (ESC) included in the bidding documents and Contracts or as described in the Contractor ESMP.

DPDTA will have the responsibility of conducting the environmental, social, health, and safety inspection. An annual inspection report must be submitted (together with the monitoring report) to MTA and the World Bank for review and approval. A proposed subprojects Monitoring Plans will be included in the respective ESMP specifying the type of monitoring, who will do it, how much it will cost to carry out monitoring, and what other inputs, such as training, are necessary.

Environmental and social monitoring for the project will focus on the activities and/or mitigation measures prescribed in the ESIA/ESMP for the identified environmental and social impacts. The ESIA/ESMP to be prepared at subproject level shall also include the soft components (of the project based on the provisions / measures given within this ESMP.

Specifically, the monitoring process will include, but no limited to:

- Selection of environmental and social parameters at specific locations and for specific environmental components, in line with the sub-project ESMPs;
- Visual observations of impacts and respective mitigation measures on environmental and social components.
- Consultation with the key stakeholders and communities.

Specific parameters will have to be developed for each subproject once the project activities and sites have been defined. The summary of the most important parameters to be monitored are listed table below:

Environmental issue	Indicator	Time reporting
Loss of properties	RAP and GRM in Place	Monthly
	GRM records	
	People Compensated	
	Number of claims received	
	Presence of traffic management plan	
	Number of accidents reported	
	waste collection points established within measure stop places	
Occupational Health	Number of Workers with PPE	Monthly
	Numbers of safety briefings	
	Number of near misses	
	Number traffic management inspections	
	Stop work lost time	
Increase risk of HIV/AIDS and STIs	Number of Condoms distributed	Monthly
	Number of free test done	
	Presence of Service provider	
	Number of sensitization on HIV/AIDs done (minutes of the meetings)	
Increased risk of GBV and SEA and child labour	No. of sensitization meetings ad records	Monthly
	Presence of service provider	

	Number of claims received	
	Number of assisted victims	
	Presence of Workers' Code of Conduct .	
	GRM records on GBV and SEA	
	Presence of GBV plan	
	Employment records showing age	
Soil erosion, vegetation protection and water management	Sediment load in installed biophysical monitoring stations	Annually
	Frequency of spraying of water on dusty surfaces	Monthly
	Water quality parameters (pH, EC, TDS, DO, Ca, Mg, TSS, Turbidity, NH4+, BOD, COD, Coli form Count, Grease and oil, etc.) level as per national standards and international standards, such as WHO, WBG EHS guideline	Monthly/Quarterly
	No. of tree seedlings planted	
	Number of Compensated people due to loss of trees (fruits, timber etc.)	
	No of subproject engaged in afforestation for loss of vegetation	
Capacity building	Number of training on Environmental and Social. Safeguards	Quarterly
	Number of people (workers) attending training session	

Table 7: Example of indicators to be monitor during the project implementation

Among the key issues to be monitored will be: (i) the status of the biological conditions; (ii) status of the physical works; (iii) the technical and environmental problems encountered; (iii) proposed solutions to the problems encountered; and, (v) the effectiveness of environmental and social measures adopted. The ESMP monitoring programme is proposed for implementation at two-levels – the supervisory activity carried out by the control or supervision missions of the African Development Bank and the regular monitoring activities conducted by PIU –Environmental expert.

Table 8: Monitoring Program

Item	Monitoring Parameters	Monitoring Frequency	Monitoring Locations	Responsibility
Environmental best practices (farming production, etc.), awareness campaigns; Training and education	Surveys, field verification, proper use of natural resources, waste management, use of pesticides and fertilizers Training records; Sensitization messages; Bush fire control messages dissemination	Continuous	All sites	PIU in cooperation with Environment authorities
Training and education on infrastructure management and SME's management	Proper use of facilities Creation and functioning of new SME's	Continuous	All sites	PIU

Water and soil quality	General quality parameters for soil and water: pH Dissolved Oxygen Total Dissolved Solids Conductivity Turbidity Temperature Oxidation Reduction Potential Nutrients	One time before starting the project in order to obtain a general reference situation followed by 2 times each year (dry and rainy season)	For each site, 2 sampling stations: 1 in an area directly influenced by the project and one in a nearby location not affected directly by the activities	PIU in cooperation with DPDTA
Occupational Health	Number of Workers with PPE; Numbers of safety briefings; Number of near misses; Number of Emergency/Fire drills Stop work lost time; Number of Condoms distributed Number of sensitization on HIV/AIDs done (minutes of the meetings); Presence of Service provider;	Monthly	For all contractors and subcontractors in all sites	PIU monitoring and evaluation expert Environmental)

	No. of sensitization meetings ad records			
Gender Based Violence (GVB) and GRM (Grievance redress mechanism)	Presence of service provider Number of claims received Number of assisted victims Presence of Workers' Code of Conduct. GRM records on GBV and SEA Presence of GBV plan Employment records showing age	Monthly	For all contractors and subcontractors in all sites	PIU (monitoring and evaluation expert Environmental expert)

7.1. ENVIRONMENTAL AND SOCIAL AUDIT

An external independent environmental, social, health and safety audit will be carried out at mid-term of project implementation and the end of the project. It is proposed that AQUA/MTA will conduct its audit to verify compliance with the GoM requirements, mainly based on the ESMP, while DPDTA will focus on compliance with the project requirements as such. The two audit teams will report to ANE and the World Bank, who will deal with the implementation of any corrective measures as required. The audits are necessary to ensure that (i) the ESMF and the ESMP processes are being implemented appropriately, and (ii) mitigation measures are being identified and implemented accordingly. The audit will be able to identify any amendments in the ESMF approach that are required to improve its effectiveness.

The Audit Reports will include:

- A summary of the environmental, social, health, and safety performance of the sub-projects, based on the ESIAs, ESMPs RAPs, and the implementation of the Environmental and Social Clauses in the Contractor Contracts and Contractor ESMPs.
- A presentation of compliance and progress in the implementation of the sub-projects ESMPs.
- A summary of the environmental and social monitoring results from individual sub-projects monitoring measures (as set out in the sub-project ESMPs);
- A chapter on GRM and GVB records of complaints and response, as well as the involvement of the project institutions staff (PIU, Contractors, Supervising entity etc)
- Examine monitoring programs, parameters, and procedures in place for control and corrective actions in case of emergencies.
- Examine records of incidents and accidents and the likelihood of future occurrence of the incidents and accidents.
- Inspect all working areas and camping sites including borrow and quarry areas, where dangerous products are stored and disposed of and give a record of all significant environmental, social, health, and safety risks associated with such activities.
- Examine and seek views on health and safety issues from the project employees, the local and other potentially affected communities; and
- Prepare a list of health and safety and environmental and social concerns of past and on-going activities.

8. CAPACITY BUILDING REQUIREMENTS

Successful implementation of the Project will depend among other aspects on the effective implementation of the environmental and social management measures outlined in this EESMP. Training and capacity building will be necessary for the implementing agencies, contractor workers and communities, surrounding the project, to ensure that they have the appropriate knowledge and skills to develop, implement, monitor and report on the site specific environmental and social management plans.

Building capacity is about increasing the knowledge and skills of individuals and strengthening the supporting organizational structures and systems that are needed to effectively implement this ESMF. Implementing agencies, in some cases, environment and social safeguards personnel are present but their level of training and technical capacity on environmental and social safeguards principles and tools is not sufficient. Training and awareness creation can raise their knowledge.

8.1. INSTITUTIONAL CAPACITY ASSESSMENT AND ANALYSIS

As stated, before the country has done considerable progress in institutional, legal, and regulatory processes related to environmental and social management issues. However, coordination and law enforcement remain a serious challenge.

The successful implementation of this project will depend on the capacity vested at the PIU level to coordinate with the beneficiaries' institutions (INGD, MADER) at the national and provincial levels. Both institution at central level have a safeguard cabinets, with the main objectives are described above. INGD safeguard Cabinet is understaffed, INGD still in the structuring of the institution, but from the talk with Arid and Semi-Arid division managers it is expected that the following people be placed at central and local level (delegation) to oversee the environmental and social portfolio of INGD, in the project area:

Table 9: INGD Safeguard staff needed

	Number of staff to be placed at safeguard cabinet	Skill needed
INGD	5	Social and Environmental expertise, capacity to

		managed and GRM database
Maputo	3	Environment and social
Gaza	3	Environment and social
Inhambane	3	Environment and social

The staff need to have substantial knowledge of environment, social science with expertise in gender and also be able to manage GRM of the INGD. The Safeguard Office at INGD (central and provincial level), will need to be equipped. And the staff capacitated.

The District Services of Planning and Infrastructure (SDPI), which have a unit that deals with environmental matters at the district level, should be given special attention to building their capacity to manage the ESIA/ESMP development, implementation, monitoring and reporting. So far, these processes are managed mainly at the provincial and central levels. Only a limited number of districts have made significant progress in getting actively and competently involved in ESIA/ESMP.

The project will assess environmental and social capacity and prepare a training program to strengthen capacity in coordinating, planning, implementing, and monitoring environmental and social issues. For the successful implementation of this ESMP, the capacity building requirements will mostly be in the form of training programs and sensitization workshops for the coordinating team, Environmental Affairs Department and SDPI staff, Contractors, Supervising Engineers, and local communities. The exercise will be customized according to each level's needs to ensure adequacy in implementation of the ESMP and therefore, it is required to indicate detailed capacity development requirements and recommendations in this ESMP, through customizing several road and infrastructure development project experiences to identify the capacity gap and propose project-specific training and other capacity development program.

The PIU will provide training and institutional capacity building. The objective of the training under this ESMP is to:

- Ensure that staffs from all relevant institutions can assist communities, to appraise, to approve, and to supervise the implementation of subprojects.
- Representatives and leaders of community members, Institutions, and associations at local levels to prioritize their needs, and to participate in identification of impact and implementation and management of the environmental and social aspects of subprojects activities; and
- Support local representatives, and relevant committees to have a sensitization and awareness regarding environmental and social aspects indicated in safeguards

instruments such as ESIA, ESMP, ESMF, RPF, and ARAP and the implementations of these instruments that ultimately contribute to projects implementation in an environmentally friendly and socially acceptable manner.

8.2. PROPOSED TRAINING PROGRAM

PIU safeguards specialists will require an induction training on AfDB and GoM environmental and social safeguards policies, applicable to the **CLINFREDEP** and on the use of the screening and other pertinent checklists.

The Training program shall include engineer/technical staff of the PIU team at INGD to raise their awareness for the issues related with environmental and social management process of the **CLINFREDEP**. This training shall also include or extended to the Safeguard INGD team at central and provincial/district level and any other stakeholder that is part of the implementation of the project.

Annual follow-up training is anticipated. The anticipated capacity building demand of the various stakeholders, experts, and officials relevant to the implementation of this ESMP will be managed in terms of technical training, awareness creation, and sensitization for those who will be drawn from the following institutions, but not limited to:

- Environmental and social experts of implementing institutions.
- Relevant experts and officials at a provincial and district level.
- Representatives from community members, etc.

The first step in pursuing capacity building will be to identify the capacity building needs of the various stakeholders. However, in addition to the needs identified, an indicative list of areas of training and awareness relevant to the implementation of this ESMF has been proposed which includes:

- National and AfDB safeguard policies as well as implementation and enforcement.
- Application of ESMP tools (Screening checklists, ESIA/ESMP), ESIA process, their review, implementation, and enforcement
- Development of mitigation measures and Environmental and Social Management Plans (ESMPs), ARAP; Other instruments, such as: Waste Management Plan (WMP), Grievance Redress Mechanism; Stakeholder engagement; and Occupational Safety and Health issues (OHS), GBV, etc.
- Project cycle and ESIA/ ESMP (including E&S clauses in subproject contracts, EIA law, procedures, & guidelines and enforcing mechanisms.

- Demonstrate the role of the various key players in the implementation and monitoring of the safeguard instruments (ESMF-ESIA/ESMP/ARAP).
- Sensitize representatives and leaders of community groups and associations, including women's and people with disabilities representatives, (who will, in turn, convey the message to their respective communities) on the implementation and management of the mitigation measures; and on their roles in achieving environmental and social sustainability;
- Explain and sensitize the local leaders and all stakeholders about the GRM and GBV issues on prevention and mitigation.
- A specific training on GVB shall be done, but not limited the following aspects:
    - GVB risk assessment;
    - Awareness and definition of various measures for different targeted groups and entities;
    - GRM procedures sensitive to GVB situation
- Explain the COVID protocols to the stakeholders and the contractor, supervisors, etc. to be applied during the implementation phase.
- Environmental reporting, monitoring, and follow-up of ESMP.
- In addition, a more detailed and specific training module will be developed and delivered to the INGD, who are responsible and involved in the implementation of E&S safeguards and implementation of the proposed subprojects. The project will develop a training plan based on the needs identified that includes regular updates and refresher modules delivered during ESMF implementation. Technical assistance can be used to assist the PIU in the training process.

Furthermore, institutional capacity building will also consider the training of employees involved on soft components therefore, the Technical assistances should have a Module on Env&Soc Safeguards on (Soil and Water pollution, Wastes, OHS and GBV, etc.).

9. ESTIMATED COST

The cost of ESMP implementation is part of the bill of quantities of the project design. Most of the actions (mitigation and enhancement measures) that are proposed should be assured under each activity (construction and/or/operation) as routine best practices that should be included in the Terms of Reference (ToR) of each contract. To effectively implement the environmental and social management mitigation measures as part of the ESMP, necessary budgetary provisions have to be made for sub-projects in all components. It is important to identify financial requirements even if are indicative. This ensures upfront appreciation of the financial requirements and allows early planning and budgeting accordingly.

For the estimates the consultant did adopted some assumption:

1. Estimates are done for each district. The subprojects will be of low magnitude, and therefore is expected that a majority of the subproject will be of category C, with less requirements, expectation will be for the component 1 construction of water reservoirs, which is expected to be category B ;

2. Capacity Building of INGD safeguard unity a lump sum was considered and should be used for training, provide equipment for the dedicated safeguard tem to the project at all level (central, provincial and district level) ;

Tentative budget for the project includes:

- Payment of consultants to prepare of ESIA, ESMP, ARAP for subprojects;
- Environmental and social mitigation cost;
- Sensitization and training cost and the cost of environmental monitoring and reporting.
- Institutional capacity building for the coordination team representatives at national and local level on safeguards monitoring;
- Implementation of mitigation measures proposed under the ESIA and ESMP;
- Operation of the GRM. GVB and the resettlement committees;
- Implementation of GBV mitigation measures;
- Environmental licence permits and other permits (Lavra, DUAT etc.)
- Environmental auditing and monitoring process by AQUA/Independent auditor;
- Provision for salaries of the additional staff to be hired by the project;
  Implementation of COVID 19 protocol.

Table 10: Cost estimates for implementation of ESMF

Itens	Number of subprojects(t 6 districts)	Cost per subproject (1000 UDB)	Total(1000 USD)
Screening by MTA/DPDTA/INGD	6.00	5.00	30.00
Payment of Consultants to prepare of EIA, ESMP, RAP/ARAP for Subprojects	6.00	15.00	90.00
Sensization and training cost of environmental monitoring and reporting	20.00	3.00	60.00
Institutional capacity building for safeguards Cabinet			75.00
Implementation of ESIA and ESMP/RAP/ARAP	6.00	10.00	60.00
Operation of GRM	6.00	10.00	60.00
Environmental premits and other permits	6.00	5.00	30.00
Salaries for Env and Social expert to be hired by the PIU	1.00	210.00	210.00
Total			615.00

The total estimates for implementing theESMP is estimated six hundred thousand and fiftheen American Dollars (615 000,00). Calculated values are only indicatives, these figures will be adjusted at the subprojects level. The Contractor's costs shall be financed from this budget, on proof of record (e.g. time sheets, material invoices etc.) for the following:

- Mobilisation of an Health Safety and Environment (HSE) Officer and safety officers at all work sites Safety Officer when acting in the role of Safety Officer;
- Recruitment of Community Liasion Officer for the Stakeholder Engagement and implementation of the GRM process e.g. Sensitisation of local communities on the existence of the GRM and its process; and Orientation of Grievance Redress Committees on their roles and responsibilities and GRM process;
- Recruitment of provider for delivery of GBV and CAE assistance of the victims, establishment of various channels and management of the database;
- Expenses related to delivering HIV/AIDS, GBV and CAE training;

- Safety signage, condoms, voluntary counselling and testing,.;
- Drug and alcohol testing of staff to enforce a zero alcohol tolerance Policy;
- Sexually Transmitted Infections (STI) including HIV/AIDS screening;

The project will include the capacity building for the Safeguard Gabnet at INGD. This will include resoruces for the staff training at central and provincial level, as well as equipe the gabnet to fulfill its mandate for the project.

The project will be implemented during five years (5) . Most of environmental impacts will be born at earlier stages of the project implementation, when construction activities will be carried out. Then, during the operation phase the environmental issues will mostly base on the water quality assurance, and fertilizer and pesticides

The contractor shall report to the PIU on a monthly basis the progress in the construction activities. A quarter site visit meeting shall be conducted with Client, ADB as a financial institution and the contractor.

10. CONCLUSION AND RECOMMENDATIONS

The implementation of the project is expected to result in more positive impacts on the environment as well as on the socio-economic status of the communities in the targeted districts rather than negative impacts. The expected negative impacts are expected to occur during the civil works that will be undertaken on component 1 and inappropriate agriculture practices and agro-processing activities within the target communities. Minor beneficial impacts are expected under the component one, being mostly related with employment. More beneficial impacts will accrue during the operation phase and will mostly result in better crop production (reduction of crop failure) and therefore increase agriculture trade and reduction of activities that threaten biodiversity and nature conservation.

During the project implementation and through the ESMP, awareness and training activities and farmer's assistance (technical assistance, through extension services) will be the tools to be used to transfer knowledge and messages to improve agriculture production and resilience. The participatory approach will be used to engage communities in all project implementation stages.

It is strongly recommended that each site develops and implements site specific ESMPs to mitigate all impacts that will be identified after the screening of each project site. The ESMPs should also include mitigation measures for the operation phase. This will ensure that the Project avoids/mitigate and manages all adverse impacts/risks associated with all project activities within acceptable limits. The positive outcomes will be enhanced to maximize the benefits for the society as well as for conservation. The Project bidding documents should include adequate E and S Specifications and the appropriate environmental and social clauses should be included in Contractors' contracts to ensure compliance with mitigation measures in the ESMP, national regulations, and the Bank's ISS requirement standards. The ESMP should form an integral part of the project implementation, monitoring and reporting and should be subjected to monitoring by the Bank and the Borrower Executing Agency (under the Environmental and Social Safeguards Specialist and the M&E project officer) in close cooperation with the National/provincial Environment Authorities.

11. CONSULTED REFERENCES

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12. ANNEXES

ANNEX I: ENVIRONMENTAL SCREENING FORM FOR CHECKLIST OF LIKELY ENVIRONMENTAL AND SOCIAL IMPACTS OF SUB-PROJECTS

Project number:

Sub-Project type:

Name of district for infrastructure rehabilitation/construction:

Name of Executing Agent:

Date:

Name of the Approving Authority:

PART A: BRIEF DESCRIPTION OF THE PROPOSED ACTIVITIES

Please provide brief information on the project

Please provide information regarding actions needed during the construction of facilities including support/ancillary structures and activities required to build them, e.g. need for borrow pits, access roads, campsites etc.

Please describe how the construction/rehabilitation activities will be carried out, including complementary activities and infrastructures and resources required e.g., roads, and traffic routes, disposal sites (waste and removed materials), water supply, energy requirement, storage areas, human resources, worker camps, security arrangements, etc.

PART B: BRIEF DESCRIPTION OF THE ENVIRONMENTAL SITUATION AND

IDENTIFICATION OF ENVIRONMENTAL AND SOCIAL IMPACTS

Name, job title, and contact details of the person responsible for filling the Form:

Name:

Job title:

Telephone numbers:

Fax Number: ----------

E-mail address:

Date:

Signature: .....

Please describe the proposed infrastructures location, sitting, coordinates; surroundings (include a map of the sub-region as well as a detailed area map of the project and its ancillary facilities, and their immediate surroundings).

Describe the land formation, topography, vegetation in/adjacent to the activity areas (project and ancillary facilities/activities).

Estimate and indicate where vegetation might need to be cleared, erosion and drainage issues might occur.

	Environmental and Social aspect	Yes	No	Don't Know
	Is the site zoned for the proposed land-use?			
	Are there any environmentally sensitive areas or threatened species (specify below) that could be adversely affected by the project?			
	Are there any intact natural forests near or adjacent to the project?			
	Is there any surface water courses?			
	Is there any natural springs?			
	Is the water table close to the surface? i.e. 0,5 m or less?			
	Are there any wetlands (lakes, swamp, seasonally inundated areas) in the proximity of the site?			
	Is the project located near the coast? If so near any marine reserve area?			
	Is there any area of high biodiversity or high conservation value?			
	Are there habitats of endangered/threatened or rare species for which protection is required under the Mozambican national law/local law and/or international agreements (such as IUCN listed or identified as HVCA or IBA?)			
	Is there a possibility that, due to construction/rehabilitation works and subsequent operation of the infrastructure, the river and lake ecology will be negatively affected with regards to its water quality and quantity?			
	Is the site (or its complementary facilities) located within/adjacent to any protected areas designated by the government or international agreement (national park, national reserve, world heritage site etc.)?			
	Is the project likely to alter any historical, archaeological, cultural heritage traditional (sacred, ritual area) site or require			

	excavation or other significant disruption near same?			
	Will the project involve any land acquisition?			
	Will any such land acquisition be effected through voluntary donations?			
	Will the activities be located in any vacant public land?			
	Under any of the types of land acquisition above are there any current uses or activities on the land proposed to be acquired? Any formal or informal occupation?			
	Is the project located in any or near polluted area (near a waste dump or any industrial facility)?			
	Is the project located in an area of steep slope and or susceptible to landslides or erosion of soils?			
	Is the project located in or near to agricultural land? Including seasonal, recession, or sporadic agriculture?			
	Is the project located in the proximities of tourism activities?			
	Is the project site susceptible to natural disasters (flooding, fire, cyclones and earth quake)?			
	Is the project located in area of population concentration points (schools, markets, health facilities, churches, office buildings, water sources and commercial areas, transportation hubs)?			
	Will the construction/rehabilitation activities including support facilities result in the permanent or temporary loss of crops, fruit trees and household or livelihood related infra-structure (such as granaries, outside toilets and kitchens, livestock grazing and watering areas, irrigation canals, wells and water sources?			
	Will the construction/rehabilitation activities including support facilities interfere with employment, livelihood activities, markets or formal or informal commercial activities including street vendors and similar?			
	Will the construction/rehabilitation works interfere with or block access, routes etc. (for people, livestock and wildlife) or traffic			

	routing and flows?			
	Will the construction or operating noise or vibration level exceed the allowable/safe noise/vibration limits?			
	Will the construction/rehabilitation works require large number of staff and labourers as compared to the size of the communities? Large construction camp? Overnight worker accommodations for extended periods?			
	Will the activities result in emission of significant amounts of dust, hazardous fumes?			
	Will the activities decrease traffic or personal safety in their immediacy or beyond? during construction and/or operation			
	Will the construction/rehabilitation works generate solid or liquid wastes? (including human excreta/sewage, asbestos,)			
	If "Yes", does the architectural plan include provisions for their adequate collection and disposal, particularly asbestos?			
	Are the construction/rehabilitation activities prone to hazards, risks and could they result in accidents and injuries to workers or nearby communities during construction or operation?			
	Will the operation involve use of considerable amounts of natural resources (construction materials, water, land, energy from biomass etc.) or may lead to their depletion or degradation at points of source or discharge?			
	Has public consultation and participation been sought?			
	Will the project interfere with community (households) access to water, firewood, medicinal and food plants, hunting or fishing resources, and other natural resources in general that support food security or livelihood activities?			
	Will the community participate in work opportunities or receive any benefits from the project?			
	Is the community highly vulnerable?			

	Will there be clearance of trees?			
	Will there be any significant quantities of aggregates to be purchased from loan chambers or quarries)?			
	Will there be production of domestic / sanitary wastewater (campsite, offices, dormitories, etc.)?			
	Is the project located close to water sources for the community (fountains, wells, boreholes, etc.)?			
	Is there a likelihood of an increased incidence of cases of diseases related to water accumulations (malaria, etc.)?			
	Will the project cause proportionally greater negative impacts on vulnerable groups, such as the poor, children, the elderly, women, people with disabilities?			
	Is there knowledge of situations or prevalence of Gender Based Violence (GBV), child labour, forced labour or sexual abuse and exploitation in the project area?			
	Will there be an increase in the occurrence of Gender Based Violence (GBV), child labour, forced labour or sexual abuse and exploitation, due to the project and the necessary workforce?			
	Is there a likelihood of an increased incidence of HIV / AIDS cases?			
	Will heavy equipment and machinery be used?			
	Is the community conflictive?			
	Is the community known to be opposed to the project or similar activities?			

PART D: MITIGATION MEASURES

For all "Yes" responses, please briefly describe the nature and scope of the impacts and the measures proposed to be taken to address them. It should be noted that they are provided for in the ESMF document.

PART E: SCREENING RESULTS

The project include construction of water reservoirs/multifunctional borehole and other processing facilities and has been categorized by the Bank as category 2. Therefore, the

subprojects are likely to be categorized under category B and C by the screening process of the Mozambican institution.

Eligibly for funding _____ Yes _____No

If No, state reason and recommend needed for revision of design_____

Sub-project AFDB Environmental Category: 2

Requirements (check)

__ ____ESMP ____ESIA/ESMP ____ Abbreviated RAP

Subsequent to completion of the present Environmental and Social Screening Form, the analysis by the DPDTA will follow in order to classify the activity into one of the categories A+, A, B or C according to local law. The PIU (along with DPDTA as applicable) will validate the category and ensure that the appropriate ESHS studies are carried out and an ESMP or an ESIA, and where applicable a RAP are prepared.

ANNEX II. SAMPLE/GENERAL TORS FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENTS.

- Non-technical summary
- Identification and address of the proponent as well as the interdisciplinary team responsible for the EIA
- Limits and patterns of land use in the areas of direct and indirect influence of the activity
- a description of the activity and the different actions envisaged therein, as well as the alternatives in the stages of planning, construction, exploration and when it is the case of temporary activity its deactivation.
- Biophysical and socioeconomic description of the site, including preliminary identification of ecosystem services and vulnerability to climate change.
- Identification and evaluation of the fatal issues of the activity if they exist,
- Identification of potential impacts of relevant nature on the activity, including those related to GVB, OHS, GRM climate change, if applicable,
- Identification and description of the aspects to be investigated in detail during the ESIA,
- Public participation report in accordance with article 15, paragraph 9.

Template for the ToRs:

- Description of the specialized studies identified as necessary during the Scope and to be carried out during the EIA for MTA Category A subprojects.
- Methodology for assessing the ecosystem services.
- Description of viable alternatives identified and to be investigated in the ESIA.
- Methodology for identifying and assessing environmental impacts, in particular impacts GVB, GRM, OHS and climate change and vulnerability to climate change and biodiversity, including residual and social impacts in the construction, operation and decommissioning phases.
- Additional information necessary.

ANNEX III. TEMPLATE FOR THE ESIA IN ACCORDANCE WITH THE DECREE 45/2015 OF 31 (MINIMAL CONTENT)

- Non-technical summary
- Identification and address of the proponent
- Identification of the interdisciplinary team that prepared the EIA
- Legal framework of the activity, including resettlement, counterbalance, territorial planning plans for direct and indirect influence areas,
- Description of the activity,
- Description and detailed comparison of the different alternatives,
- Delimitation and geographical representation of the area,
- Characterization of the environmental and social situation of reference,
- Forecasting the future environmental situation, with or without mitigation measures,
- Summary of the environmental and socio-economic impacts and viability of the proposed alternatives,
- Identification and analysis of the impact of the project on OHS, gender (GVB) and vulnerable groups of affected communities and mitigation measures;
- Identification and evaluation of direct, indirect, residual, cumulative impacts and mitigation or compensation measures;
- Presentation of the provisional or definitive DUAT of the project area;
- The ESMP of the activity;
- Management Plan for biodiversity balance as an annex, if necessary;
- Report of the Physical and Socioeconomic survey, as separate annex when necessary;
- Public participation report in accordance with the stipulations of article 15, paragraph 9;
- Proof for payment of income taxes of engineer not domiciled in Mozambique.

ANNEX IV. SAMPLE/GENERAL OF ESMPS, ACCORDING TO EACH PROJECT COMPONENT

ESMPs should demonstrate that proposed environmental and social management and monitoring activities will encompass all major impacts and how they will be integrated into subproject supervision. The ESMP should also describe proposed measures, methods, and actions to facilitate public consultation. It is important that the ESMP identify linkages to other social and environmental safeguard plans relating to the subproject, such as plans dealing with resettlement issues. Given the scale and nature of the subproject and the significance of the potential anticipated impacts, INGC will be responsible for preparing a sub project specific ESMP for identified subprojects in a format suitable for inclusion as technical specifications in the contract of each subproject beneficiaries.

ESMPs should be finalized and approved after taking into account comments from the MTA/DPDTA. The World Bank safeguards team will review and provide comments on draft site-specific instruments (if required) and monitor safeguards compliance, among others. Given below are the important elements that constitute an ESMP:

Description of the sub project: Scale nature and type of subprojects implemented under the proposed programs are summarized.

Description of Subproject implementation area: The Biophysical and social environmental setting of the specific subproject implementation area are summarized

Impacts: Predicted adverse environmental and social impacts (GVB, OHS, GRM and any uncertainties about their effects) for which mitigation is necessary should be identified and summarized.

Description of Mitigation Measures: Each measure should be briefly described in relation to the impact(s) and conditions under which it is required. These should be accompanied by and/or referenced to designs, development activities, operating procedures, and implementation responsibilities. Proposed measures and actions to facilitate public consultations should be clearly described and justified. Feasible and cost-effective measures to minimize adverse impacts to acceptable levels should be specified with reference to each impact identified. Further, the ESMP should provide details on the conditions under which the mitigation measure should be implemented. The ESMP should also indicate the various practicable measures applicable to the proposed subprojects at each project phases (design, construction and/or operation). Efforts should also be made to mainstream environmental aspects wherever possible.

Description of monitoring program: The ESMP identifies monitoring objectives and specifies the type of monitoring required; it also describes performance indicators which provide linkages between impacts and mitigation measures identified in the ESIA report, parameters to be measured (for example: national standards, extent of impacted area to be considered, etc.), methods to be used, sampling location and frequency of measurements, and definition of thresholds to signal the need for corrective actions. Monitoring and supervision arrangements should be agreed by the Bank and the borrower to: ensure timely detection of conditions requiring remedial measures in keeping with best practice; provide information and the progress and results of mitigation and institutional strengthening measures; and, assess compliance with National and World Bank environmental safeguard policies

Institutional arrangements: Institutions responsible for implementing mitigation measures and for monitoring their performance should be clearly identified. Where necessary, mechanisms for institutional coordination should be identified, as often, monitoring tends to involve more than one institution. This is especially important for subprojects requiring cross-sectoral integration. In particular, the ESMP specifies who is responsible for undertaking the mitigation and monitoring measures, e.g., for enforcement of remedial actions, monitoring of implementation, training, financing, and reporting. Institutional arrangements should also be crafted to maintain support for agreed enforcement measures for environmental protection. Where necessary, the ESMP should propose strengthening the relevant agencies through such actions as: establishment of appropriate organizational arrangements; appointment of key staff and consultants.

Implementing schedules: The timing, frequency and duration of mitigation measures and monitoring should be included in an implementation schedule, showing phasing and coordination with procedures in the overall subproject implementation/operations manual. Linkages should be specified where implementation of mitigation measures is tied to institutional strengthening and to the subproject legal agreements, e.g. as conditions for loan effectiveness or disbursement.

Reporting procedures: Feedback mechanisms to inform the relevant parties on the progress and effectiveness of the mitigation measures and monitoring itself should be specified. Guidelines on the type of information required and the presentation of feedback information should also be highlighted.

Cost estimates and sources of funds: Implementation of mitigation measures mentioned in the ESMP will involve an initial investment cost as well as recurrent costs. The ESMP should include cost estimates into the sub-project design, bidding and contract documents to ensure that the contractors will comply with the mitigation measures. The costs for implementing the ESMP will be included in the sub-project design, as well as in the bidding and contract documents. It is important to capture all costs – including administrative, design and consultancy, and operational and maintenance costs – resulting from meeting required standards or modifying subproject design. For each potential impacts of the subproject, corresponding mitigation measures, and

who is responsible for implementation is indicated. For each potential environmental and social impact, there can be more than one mitigation measure. Responsibility for implementation of mitigation measures will typically rest with the contractor and engineer during construction and operation of the subprojects. The monitoring section of the ESMP prescribes indicators for monitoring the environmental and social impact and the effects of mitigation measures.

ANNEX V. SAMPLE MONITORING AND REPORTING FORMATS.

Environmental and Social Monitoring by Contractors will require that contractors monitor, keep records and report on the following environmental and social issues for their subproject. The application of this requirement will be proportionate to the activities and to the size of the contract, in manner acceptable to the World Bank and to ANE:

Safety: hours worked, recordable incidents and corresponding Root Cause Analysis (lost time incidents, medical treatment cases), first aid cases, high potential near misses, and remedial and preventive activities required (for example, revised job safety analysis, new or different equipment, skills training, and so forth).

Environmental incidents and near misses: environmental incidents and high potential near misses and how they have been addressed, what is outstanding, and lessons learned.

Major works: those undertaken and completed, progress against project schedule, and key work fronts (work areas).

E&S requirements: noncompliance incidents with permits and national law (legal noncompliance), project commitments, or other E&S requirements such as GVB, OHS.

E&S inspections and audits: by contractor, engineer, or others, including authorities—to include date, inspector or auditor name, sites visited, and records reviewed, major findings, and actions taken.

Workers: number of workers, indication of origin (expatriate, local, nonlocal nationals), gender, age with evidence that no child labour is involved, and skill level (unskilled, skilled, supervisory, professional, management), with contract and code of conduct signed;

Training on E&S issues: including dates, number of trainees, and topics.

Footprint management: details of any work outside boundaries or major off-site impacts caused by ongoing construction to include date, location, impacts, and actions taken.

External stakeholder engagement: highlights, including formal and informal meetings, and information disclosure and dissemination to include a breakdown of women and men consulted and themes coming from various stakeholder groups, including vulnerable groups (e.g., disabled, elderly, children, etc.).

Details of any security risks: details of risks the contractor may be exposed to while performing its work the threats may come from third parties external to the project.

Worker grievances: details including occurrence date, grievance, and date submitted; actions taken and dates; resolution (if any) and date; and follow-up yet to be taken grievances listed should include those received since the preceding report and those that were unresolved at the time of that report.

External stakeholder grievances: grievance and date submitted, action(s) taken and date(s), resolution (if any) and date, and follow-up yet to be taken grievances listed should include those received since the preceding report and those that were unresolved at the time of that report. Grievance data should be gender disaggregated.

Deficiency and performance management: actions taken in response to previous notices of deficiency or observations regarding E&S performance and/or plans for actions to be taken these should continue to be reported until INGD determines the issue is resolved satisfactorily.

In general term the Environmental Monitoring Report Outline are as following:

1.Background

1.1Project location

Scope and Methodology

Objectives

Methodology

2. anticipated impacts and mitigation measures

2.Environmental Management Plan Implementation

2.1 Permits and permission

2.2 Site location and contractors' camp

2.3 Solid waste management

2.4 Liquid waste

2.5 Environmental training and awareness

2.6 Local labour

2.7 Maintenance and storage

2.8 Storm water management and erosion

2.9 Air and Noise emission and odour control and safety

2.10 Health and safety

2.11 Conservation of vegetation and wildlife

2.12 Protection of sensitive environments and natural features

2.13 Fire prevention and control

2.14 Community relation and control of community disruption

2.15 Traffic control

2.16 Private land and community properties

3. Planning borrow pits and quarries

3.1 Decommissioning of the site

4. GRM and GVB

Number of complaints received.

Number of positive responses.

Number of non-concluded responses

6. Corrective actions for all non compliances including compliance with AfDB ISS requirement standards

ANNEX VI : INDICATORS FOR THE OHS

For the OHS the report should include Within 5 working days of the end of the calendar month the Contractor will be required to report to the Engineer on their performance with the following OHS indicators:

- Number of serious near miss incidents, where serious harm to employees or others may have resulted.
- Number of fatal injuries (resulting is loss of life of someone associated with the project or the public)
- Number of notifiable injuries (an incident which requires notification of a statutory authority under health and safety legislation or the contractor's health and safety management system)
- Number of lost time injuries (an injury or illness certified by a medical practitioner that results in absence of work for at least one scheduled day or shift, following the day or shift when the accident occurred)
- Number of medical treatment injuries (the management and care of a patient to effect medical treatment or combat disease and disorder excluding: (i) visits solely for the purposes of observation or counselling; (ii) diagnostic procedures (e.g. x-rays, blood tests); or, (iii) first aid treatments as described below)
- Number of first aid injuries (minor treatments administered by a nurse or a trained first aid attendant)
- Number of restricted work cases. (those people who have returned to work, but are undertaking "light duties")
- Number of recordable strikes of services (contact with an above ground or below ground service resulting in damage or potential damage to the service)
- Rate of recordable strikes of services per services crossed.
- Lost Time Injury Frequency Rate (the number of allowed lost time injury and illness claims per million man-hours worked)
- Total Recorded Frequency Rate (the number of recordable injuries [recordable/lost time/fatal] per million man-hours worked)

The monthly reports shall also include:

Number of drug and alcohol tests

Proportion of positive drug and alcohol tests

Number of site health and safety audits conducted by contractor

Number of safety briefings

Number of near misses

Number of traffic management inspections

Number of sub-contractor reviews

Number of stops work actions

Number of hazard cards reported

Number of positive reinforcements

For COVID-19 report the number of workers sent home due to preventive measures (number of people in Quarantine, isolation and working time lost due to COVID-19 if any).

ANNEX VIII. CODES OF CONDUCT AND ACTION PLAN TO PREVENT GENDER BASED VIOLENCE AS WELL AS CHILD ABUSE/EXPLOITATION

Background

Codes of Conduct to Prevent Gender-based Violence (GBV) and Child Abuse/Exploitation (CAE) is to introduce a set of key definitions, core Codes of Conduct and guidelines that establish mechanisms for reporting, addressing, monitoring and sanctioning GBV and CAE within the work site and in its immediate surrounding communities.

The Codes of Conduct aim to prevent and/or mitigate the risks of GBV and CAE within the project. These Codes of Conduct are to be adopted by the civil works contractors, as well as supervision consultants. Mutual respect and fair treatment by all parties, that include an understanding of the impact their presence has on the communities living in the areas targeted by the project, are deemed of utmost importance to create a respectful, pleasant and productive work environment.

This will help prevent issues of GBV and CAE, thereby guaranteeing a safe environment to work in and around. The Codes also present clear guidelines for sanctions of staff should they be warranted. By ensuring that the project's staff respect the project environment and its communities, a successful attainment of the project objectives will be achieved:

A. **Company Code of Conduct:** Commits the company to addressing GBV and CAE issues

B**. Individual Code of Conduct:** Code of Conduct for everyone working with the project (contractor workers, Supervisor and ANE representatives).

A. Company Code of Conduct

The company is obliged to create and maintain an environment which prevents gender based violence (GBV) and child abuse/exploitation (CAE) issues, and where the unacceptability of GBV and actions against children are clearly communicated to all those engaged on the project. In order to prevent GBV and CAE, the following core principles and minimum standards of behaviour will apply to all employees without exception:

- GBV or CAE constitutes acts of gross misconduct and are therefore grounds for sanctions, penalties and/or termination of employment. All forms of GBV and CAE including grooming are unacceptable be it on the work site, the work site surroundings, or at worker's camps. Prosecution of those who commit GBV or CAE will be pursued if appropriate.
- Treat women, children (persons under the age of 18), and men with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Do not use language or behaviour towards women, children and men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Sexual activity with children under 18 including through digital media is prohibited. Mistaken belief regarding the age of a child and consent from the child is not defence.
- Sexual favours or other forms of humiliating, degrading or exploitative behaviour is prohibited.
- Sexual interactions between the company's employees at any level and member of the communities surrounding the workplaces that are not agreed to with full consent by all parties involved in the sexual act are prohibited. This includes relationships involving the withholding/promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex, such sexual activity is considered "non-consensual" within the scope of this Code.
- All employees, including sub-contractors are highly encouraged to report suspected or actual GBV and/or CAE by a fellow worker, whether in the same company or not. Reports must be made in accordance with GBV and CAE Allegation Procedures.

- All employees are required to attend an induction training course prior to commencing work on site to ensure they are familiar with the GBV and CAE Code of Conduct.
- All employees must attend a mandatory training course once a month for the duration of the contract starting from the first induction training prior to commencement of work to reinforce the understanding of the institutional GBV and CAE Code of Conduct.
- All employees will be required to sign an individual Code of Conduct confirming their agreement to support GBV and CAE activities.
- I do hereby acknowledge that I have read the foregoing Code of Conduct, and on behalf of the company agree to comply with the standards contained therein. I understand my role and responsibilities to prevent and respond to GBV and CAE. I understand that any action inconsistent with this Code of Conduct or failure to take action mandated by this Code of Conduct may result in disciplinary action.

Company name:

Title:

Signed by: Date: 15

B. Individual Gender Based Violence and Child Protection Code of Conduct

I acknowledge that preventing gender-based violence (GBV) and child abuse/exploitation (CAE) are important. GBV or CAE activities constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. All forms of GBV or CAE are unacceptable be it on the work site, the work site surroundings, or at worker's camps. Prosecution of those who commit GBV or CAE may be pursued if appropriate.

I agree that while working on the project, I will:

- Consent to police background check. Treat women, children (persons under the age of 18), and men with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Not use language or behaviour towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not participate in sexual activity with children including grooming or through digital media. Mistaken belief regarding the age of a child and consent from the child is not a defence.
- Not engage in sexual favours or other forms of humiliating, degrading or exploitative behaviour.
- Not have sexual interactions with members of the communities surrounding the workplace and worker's camps that are not agreed to with full consent by all parties involved in the sexual act. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex such sexual activity is considered "non-consensual" within the scope of this Code.

- Attend and actively partake in training courses related to HIV/AIDS, GBV and CAE as requested by my employer.

- Report through the GRM or to my manager any suspected or actual GBV and/or CAE by a fellow worker, whether in my company or not, or any breaches of this Code of Conduct.

With regard to children under the age of 18:

- Wherever possible, ensure that another adult is present when working in the proximity of children.
- Not invite unaccompanied children into my home, unless they are at immediate risk of injury or in physical danger. Not sleep close to unsupervised children unless absolutely necessary, in which case I must obtain my supervisor's permission, and ensure that another adult is present if possible.
- Use any computers, mobile phones, or video and digital cameras appropriately, and never to exploit or harass children or to access child pornography through any medium (see also "Use of children's images for work related purposes").
- Refrain from physical punishment or discipline of children.
- Consent is defined as the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even in the event that national legislation of the country into which the code of conduct is introduced has a lower age.
- Mistaken belief regarding the age of the child and consent from the child is not a defence.
- Refrain from hiring children for domestic or other labour, which is inappropriate given their age or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury. Comply with all relevant local legislation, including labour laws in relation to child labour.
- In a case that use of children's images for work related purposes. When photographing or filming a child for work related purposes, shall must:

    - Before photographing or filming a child, assess and endeavour to comply with local traditions or restrictions for reproducing personal images.
    - Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.
    - Ensure photographs, films, videos and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner.

- Children should be adequately clothed and not in poses that could be seen as sexually suggestive. Ensure images are honest representations of the context and the facts. Ensure file labels do not reveal identifying information about a child when sending images electronically.

Sanctions

The project has established a PLC team which include contractor and supervision consultant.

The PLC and/or the local service provider will oversee any investigation of grievances against the employee with regard to GBV and CAE, according the accused procedural fairness and within the local laws.

If an employee has breached the Code of Conduct, the contractor will take disciplinary action which could include:

- Informal warning.
- Formal warning.
- Additional Training.
- Loss of up to one week's salary.
- Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months; or,
- Termination of employment.
- In addition to the above,

if warranted, report the employee to the nearest Police within Violence Against Women and Child Department or use the police hot line call 112.

I understand that it is my responsibility to use common sense and avoid actions or behaviours that could be construed as GBV or CAE or breach this Code of Conduct.

I do hereby acknowledge that I have read the foregoing Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to GBV and CAE.

I understand that any action inconsistent with this Code of Conduct or failure to take action mandated by this Code of Conduct may result in disciplinary action and may affect my ongoing employment.

Company name:

Title:

Signed by:

Date:

ANNEX VIII: LIST OF PUBLIC PARTICIPANTS AT DISTRICT LEVEL

PREPARAÇÃO DO QUADRO DE GESTÃO AMBIENTAL E SOCIAL DO PROJECTO DE RESILENCIA CLIMATICA E FINANCIAMENTO

LISTA DE PARTICIPANTES NA CONSULTA PUBLICA

LOCAL: Distrito de Guijá - localidade Mafada

DATA: 9 / 03 / 2021

NOME	INSTITUIÇÃO/LOCAL	E-MAIL	TELEFONE	DATA DE CONTACTO
[illegible] A. Machava	D. Alfredo Nalazi		86 9255866	09/03/21
Moisés Mabunda	Mafada		8[illegible]18	
[illegible] Massingue	Mafada		865656113	09/03/21
[illegible] Matsimbe	Mafada		867672262	09/03/2021
[illegible]	Chaugue			
[illegible]				
[illegible]	Mafada			
Júlio Macamo	Mafada		87-1566013	87-1566013
Sacramento Changule	Chicango		875723083	876723093

REPÚBLICA DE MOÇAMBIQUE
INSTITUTO NACIONAL DE GESTAO DE DESASTRES

Mário

Mário Makamu	Mafada		872381559.	
Augusto Chungune	Mafada			
Jonas Chunguane	Mafada		873779496	
Aurélio [illegible]	Mafada		872574743	
Francisco Mabunda	Mafada		863305790	
[illegible]	Mbiza		880379721	
Rungo Matavel	Mafada		862602188	
Paul Chitlhango	[illegible]		862881597	
[illegible] Mabunda	Mafada		862712747	
[illegible]	Mafada		873871488	
Salomão	Mafada		867659[illegible]	

REPÚBLICA DE MOÇAMBIQUE
INSTITUTO NACIONAL DE GESTÃO DE DESASTRES

PREPARAÇÃO DO QUADRO DE GESTÃO AMBIENTAL E SOCIAL DO PROJECTO DE RESILIENCIA CLIMATICA E FINANCIAMENTO

LISTA DE PARTICIPANTES NA CONSULTA PUBLICA

LOCAL: [illegible]

DATA: 6 / 03 / 2021

NOME	INSTITUIÇÃO/LOCAL	E-MAIL	TELEFONE	DATA DE CONTACTO
[illegible]	Agricultor		[illegible]	[illegible]
[illegible]	[illegible]		[illegible]	
[illegible]	Agricultor		[illegible]	
[illegible]	Agricultor		[illegible]	
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[illegible]	Líder comunitário		[illegible]	11-03-2021
[illegible]	Líder comunitário		[illegible]	[illegible]
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REPÚBLICA DE MOÇAMBIQUE
INSTITUTO NACIONAL DE GESTÃO DE DESASTRES

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[illegible]	Agricultor		[illegible]	[illegible]
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[illegible]	Agricultor		[illegible]	[illegible]
[illegible]	Professor		[illegible]	[illegible]
[illegible]	Agricultor		[illegible]	[illegible]
[illegible]	Comerciante		[illegible]	[illegible]

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INSTITUTO NACIONAL DE GESTÃO DE DESASTRES

PREPARAÇÃO DO QUADRO DE GESTÃO AMBIENTAL E SOCIAL DO PROJECTO DE RESILENCIA CLIMATICA E FINANCIAMENTO

LISTA DE PARTICIPANTES NA CONSULTA PUBLICA

LOCAL: [illegible] — [illegible]

DATA: 15/01/2021

NOME	INSTITUIÇÃO/LOCAL	E-MAIL	TELEFONE	DATA DE CONTACTO
[illegible]	[illegible]		[illegible]	15.01.2021
[illegible]	[illegible]		[illegible]	"
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				15.01.2021
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