



MINISTRY OF ECONOMY AND FINANCE

**EMERGENCY RESILIENCE RECOVERY PROJECT FOR THE
NORTHERN AND CENTRAL REGIONS (ERRP)**

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

December, 2016

LIST OF ACRONYMS

AIAS	Water Supply and Sanitation Infrastructure Administration
ARA	Regional Water Administration
DINOTER	National Directorate of Territorial Planning and Resettlement
DIPLAC-CEE	National Directorate of Planning and Cooperation – School Construction and Equipment
DNDR	National Directorate of Rural Development
DNFFB	National Directorate of Forests and Fauna
DNGRH	National Directorate for the Management of Water Resources
DPASA	Provincial Directorate of Agriculture and Food Security
DPC	Provincial Directorate of Culture
DPOPHRH	Provincial Directorate of Public Works, Housing and Water Resources
DPS	Provincial Directorate of Health
DPTADER	Provincial Directorate of Land, Environment and Rural Development
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EA	Environmental Assessment
EFP	Environmental Focal Point
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EO	Environmental Officer
ERRP	Emergency Resilience Recovery Project for the Northern and Central Regions
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESSP	Education Sector Strategic Plan
EWS	Early Warning Systems
EU	European Union
GFDRR	Global Facility for Disaster Risk Reduction
GoM	Government of Mozambique
GRM	Grievance Redress Mechanism
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IMR	Immediate Response Mechanism
INAM	National Institute of Meteorology
INGC	National Disaster Management Institute
INIR	National Irrigation Institute
IPM	Integrated Pest Management
MASA	Ministry of Agriculture and Food Security
MEF	Ministry of Economy and Finance
MINEDH	Ministry of Education and Human Development
MITADER	Ministry of Land, Environment and Rural Development
MOPHRH	Ministry of Public Works, Housing and Water Resources
NGO	Non-governmental organization

OP	Operational Policy
PAPs	Project Affected Persons
PNDRH	National Water Resources Development Project
PROIRRI	Sustainable Irrigation Project
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
SDIP	District Services for Planning and Infrastructures
SDSMAS	District Health, Women and Social Affairs Services
ToR	Terms of Reference
UN	United Nations
WB	World Bank
WBG	World Bank Group of companies
WHO	World Health Organization

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EXECUTIVE SUMMARY

Introduction

In 2015, following a formal request by the Government of Mozambique (GoM), the World Bank approved a total amount of US\$40 million for the recovery of infrastructure that had been destroyed by the natural disasters that occurred at the end of 2014 and the beginning of 2015 in the central and northern regions of the country. The Financial Agreement for this funding was signed by the GoM, represented by the Ministry of Economy and Finance (MEF), and the World Bank on the 26th of October 2015. The agreement and funding will be implemented over a period of 4 years under the emergency resilience recovery project for the northern and central regions being implemented by the Government of Mozambique.

This project is related to specific existing arrangements of projects funded by the Bank, which are being implemented by a number of Mozambican government institutions, namely: (a) the Ministry of Public Works, Housing and Water Resources (MOPHRH) through the National Directorate of Management of Water Resources (DNGRH) for dyke rehabilitation under the Water Resources Development Project (WRD); (b) the National Irrigation Institute (INIR) for irrigation under the Sustainable Irrigation Development Project (PROIRRI); (c) the Administration of Water and Sanitation Infrastructures (AIAS) for drinking water supply under the Cities and Climate Change Project (CCCP); and (d) the Ministry of Education and Human Development MINEDH for climate-smart schools under the Education Sector Support Program (ESSP).

The current document was prepared based on extensive literature reviews in the proposed project areas; review of lessons from the synthesis of relevant provisions from the Mozambican legal framework related to the ESMF and World Bank Safeguard Policies and guideline documents; as well as feedback obtained from public consultation meetings carried out when preparing this document.

The objectives of this ESMF are to:

- Provide clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under the Emergency Resilience Recovery Project;
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social effects related to project investments;
- Determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF;
- Establish the project funding required to implement the ESMF requirements; and

- Provide practical information on resources for implementing the ESMF.

Projects are therefore required to have an ESMF which provides guidance for the preparation of an Environmental and Social Management Plan and should make provisions for how potential negative environmental and social impacts will be mitigated. The ESMF, Resettlement Policy Framework (RPF) and the Pest Management Plan (PMP) will also be used as references for the elaboration of safeguards instruments related to the ERRP Program.

The potential environmental and social impacts associated with the Project have been highlighted, and suitable mitigation measures to offset the potential negative impacts have been recommended to the project proponent. Recommendations have also been made with regards to the need to improve the institutional capacity of the entities responsible for each of the sub-components to continue integrating environmental and social considerations in the related projects.

Project Description

The key objective of the emergency resilience recovery project for the northern and central regions is to reconstruct and rehabilitate infrastructures located in priority areas that were destroyed by natural disasters that occurred and had adverse impacts in the central and northern regions of the country, in a manner that will ensure their sustainability and resilience in the long-run, and taking into account that Mozambique is a disaster-prone country characterized by recurrent natural disasters. The project has four components, namely: i) Component A - Rehabilitation and reconstruction of resilience infrastructure ii) Component B - Technical Assistance for Resilience Recovery and Vulnerability Reduction; iii) Component C - Project Implementation, Monitoring and Evaluation; and iv) Component D - Related to the Contingency Emergency Response. Each of the components of the project has specific subcomponents related to the different activities to be implemented by each sector, and these are further described in the project description section of this document.

Targeted Project Areas

The Emergency Resilience Recovery Project has been designed to be implemented over a 4-year period, in specific provinces in the central (Zambezia) and northern (Niassa and Nampula) regions of Mozambique. The provinces of Zambezia, Niassa and Nampula were identified and selected because they were particularly adversely affected by the impacts of natural disasters of 2014 and 2015 and are thus in need of reconstruction and rehabilitation of infrastructures that were damaged by the disasters. The three provinces have been exposed to flooding, strong winds, erosion, and a combination of these hazards, which have created significant damages resulting in severe losses and damages in human lives, livelihoods and infrastructure. In total, the three provinces have about 11.5 million inhabitants, which is reported to account for approximately 44 percent of the country's population. The three provinces also have extremely high incidences of poverty, and subsequently are amongst the provinces with the poorest

populations in Mozambique. The rehabilitation and reconstruction activities will be concentrated in high-risk and disaster prone areas to ensure that in those areas have access to better livelihood conditions and infrastructure that is resilience to shocks.

Institutional Arrangements

The project it will be implemented by several institutions working in different areas, comprising: The Ministry of Public Works and Water Resources (MOPHRH), through the National Directorate of Management of Water Resources (DNGRH); the Ministry of Education and Human Development (MINEDH); the Ministry of Agriculture and Food Security (MASA) through the National Irrigation Institute (INIR); and the Water Supply and Sanitation Infrastructure Administration (AIAS). In terms of institutional arrangements, and given the multisectoral nature of projects dealing with emergencies, it is expected that the project is implemented by existing units from the aforementioned institutions. Where specific units to deal with emergencies are non-existent, these are to be created and staff to be recruited.

Public Consultations

Public consultations were carried out in the three provinces for communities targeted by the ERRP, namely in Nampula, Niassa and Zambezia, as well as at central level, with the objective of gathering public perceptions of the proposed activities as well as of the provinces and key areas of intervention. The consultation process comprised two methods (i) consultation on a one-to-one basis with key stakeholders (officials from line ministries, national organizations, NGOs, the World Bank and technical staff from targeted provinces), and (ii) public meetings held in the provinces.

The objective of the consultation process was to gather general perceptions and views of all relevant stakeholders (project affected persons as well as interested persons) on the proposed project. Among others, the Consultant sought to identify and confirm conditions in the different provincial contexts, and determine specific impacts that would require to be addressed under the scope of the present ESMF.

World Bank Safeguard Policies

The World Bank Safeguard Policies (OPs) are mandatory to obtain financial support from the institution for projects that are geared poverty reduction. The ERRP has the potential of triggering most of the policies because of the nature and objective of the project related to the reconstruction and rehabilitation of infrastructures such as rural access roads, bridges, schools, and water supply systems, as well as reconstruction and/or improvements of irrigation schemes, which are likely to cause negative environmental and social effects. The OPs triggered by the ERRP are the OP 4.01 (Environmental Assessment), OP 4.09 (Pest Management) OP 4.12 (Involuntary Resettlement), OP 4.04 (Natural Habitats), and OP 4.11 (Physical and Cultural Resources).

The ESMF provides practical tools for preparing and/or implementing Environmental and Social Management Plans (ESMPs), Pest Management Plans (PMPs) and (Abbreviated) Resettlement Action Plans ((A)RAPs). Preparation of the latter are described in separate documents prepared in parallel to the present ESMF.

Mozambique Environmental and Social Management Legal Framework

A summary of environmental and social related policies, laws and regulations in Mozambique, particularly those of relevance to the Project has been included in the present ESMF. Relevant legislation in Mozambique include:

- The Constitution (2004)
- The National Environment Policy in Mozambique including the Environmental Law
- EIA Regulations
- Disaster Management Law
- The National Adaptation Programme of Action (NAPA)
- The Land Law
- Legislation on Water and Water Rights
- Electric Energy Law
- Basic Education Regulation
- Labour Law
- Regulations on Contracting for Public Civil Works
- Resettlement Legislation
- Public Consultation Regulations

Mozambique's EIA is regulated by the Decree 54/2015 of 31 December with projects classified into and four categories, namely: Category A+ which require a full EIA to be undertaken and supervised by Independent Specialist Reviewers with verifiable experience; Category A which require a full EIA; Category B which require a simplified Environmental Study as the potential impacts of projects in this grouping are considered less significant or require less complex mitigation measures; and Category C which do not require an EIA but must abide by the regulations on environmental impact. These are broadly in agreement with World Bank categories. Pesticides Regulations were passed in September 2002 and regulate the use of pesticides in Mozambique. These should be closely adhered to for any subproject where pest management is contemplated.

The Ministry of Land, Environment and Rural Development (MITADER) is responsible for issues related to land, environmental management and rural development at all levels (national, provincial and district), and therefore, the Provincial Directorates (DPTADER) as well as district representations will have a key role in the appraisal, approval and monitoring of sub-components of the project to ensure compliances with the Mozambican legislation and safeguards as outlined in the ESMF.

Gaps in the Mozambican Legal Framework and in the World Bank Safeguard Policies

The major gap in both Mozambican legislation and in the World Bank Safeguard Policies is lack of clear procedures and norms for handling health, safety and security of both the local population of a project area and/ or the project workers. The Mozambican legislation does touch on safety in the workplace, but does however fall short in terms of making specific provisions for projects such as the ERRP. To bridge the gap on procedures for health, safety and security, the *World Bank Group Environmental Health and Safety Guidelines (2007)*¹ are recommended to guide the project proponent throughout all phases of implementation of the project, and to provide some guidance on suitable mitigation measures that should be taken.

Potential environmental and social impacts and mitigation measures

Because some of the sites or specific project areas are yet unknown, the potential impacts presented in the ESMF are general and serve as a guideline for a thorough assessment once the sites have been selected. The impact assessment should consider the scope of potential interventions.

The proposed ERRP project is a Category B project as all identified potential impacts for the sub-components are site-specific; few if any of them are irreversible; and in all cases mitigation measures can be readily designed. Some of the potential environmental and social impacts include, but are not limited to the following: soil erosion (resulting from vegetation clearance and excavations of soils for activities such as the rehabilitation and construction); air pollution; disruption of the integrity of plant and animal populations and sensitive ecosystems; contamination of ground and surface water as a result of chemicals; water shortages in some areas during the rehabilitation or emergency repairs works; increase in HIV/AIDS rates as a result of workers coming from other areas; water borne illnesses resultant from still waters/ water treatment; incidents and accidents are bound to occur in the workplace; noise and vibrations and social conflicts, amongst others.

Although some negative impacts are expected from this project, there are also some significant positive impacts that may counteract the negative ones. The positive impacts include: protection against floods and droughts, improved income of participating farmers and the region, increased access to electricity, better teaching and learning conditions, improved linkages of rural producers with markets, increased communication among rural and urban populations and potentially stimulated trade; improved water supply and sanitation, reintegration of pupils into the school system, resilience, safe and healthy school environments, amongst others.

¹ World Bank Group EHS 2007: <http://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES>

Environmental and Social Management Framework Monitoring Requirements

Monitoring and reporting on progress are critical for the successful implementation of the EMSF as well as of the overall ERRP project. Reporting is based on a set of indicators which should be reported on, on a regular basis with specific responsibilities indicators set out here will be mainstreamed into the overall monitoring and evaluation (M&E) system for the project. The specific objective of the monitoring process is to ensure that the ESMP is complied with and verified at all levels and stages of the project implementation cycle. Monitoring shall be a continuous process and should include the status of compliance as well as achievement of the objectives of the project.

Given the number of institutions involved in the implementation of the ERRP, it is recommended that the inter-institutional coordination team, with the support of the Steering Committee, coordinates and liaises with other relevant government institutions with regards to environmental and social monitoring of the project. Weekly, monthly, quarterly and annual reports shall be prepared and distributed to all relevant entities.

The ESMF implementation and monitoring should be carried out by each of the project proponents, in conjunction with provincial and district authorities, and following consultation with affected persons. District authorities (SDAE/SDPI) assisted by DPTADER and/or ERRP funded technical assistance will prepare annual monitoring reports that include information on the implementation of the ESMF. DPTADER is required to conduct annual inspections for all category B projects. Annual reviews of the implementation of the ESMF will be carried out by an independent local consultant, NGO or another service provider that is not involved in the ERRP, subject to agreement by the Steering Committee and the World Bank. Independently-commissioned bi-annual environmental auditing should be carried out.

Environmental and Social Screening Process

The screening process is aimed at determining which of the project activities are likely to result in significant negative environmental and social impacts, with a view to determining appropriate impact mitigation measures for such activities, and to ensure environmental sustainability of sub-projects undertaken in the Project areas.

The screening process for this project consist of four steps i) review of environmental and social impacts checklist for projects; ii) screening of impacts from the sub-components and sites; iii) assignment of environmental categories; and iv) preparation, review and approval of an Environmental Action Plan. The screening process will be carried out using a screening form to be attached to this ESMF. The already established safeguards specialist team in the implementation units will be responsible for carrying out the environmental and social screening process in close collaboration with respective DPTADER.

Training and Institutional Capacity Development Needs

To address the above recommendations, each Safeguard Team from each of the institutions responsible for the implementation of the ERRP shall:

- Identify and train relevant personnel at all levels who will be responsible for monitoring of EMPs at site, district and provincial levels;
- Ensure effective intra-institutional coordination to certify that appropriate implementation of the proposed mitigation measures for continued improvements in environmental and social management.

For an effective integration of the proposed mitigation measures into planning, implementation and operation of the program's activities, the implementation of the Project's EMP is the responsibility of the project proponents (DNGRH, AIAS, MINEDH/ DPLEC, INIR), who will ensure compliance with all measures stipulated in the EMP by all Contractors. Furthermore, it should be mandatory that all contractors and supervisors employ experienced Environmental Specialists to ensure compliance with the EMP.

Conclusions and Recommendations

It is expected that the negative environmental and social impacts associated with the proposed ERRP will be medium to short-term, localized, insignificant and can be mitigated through compliance with EIA Regulations and an Environmental and Social Management Plan (ESMP). Specific measures should be implemented by Contractors, and such measures should form part of the Contractors' contract and subsequent EMPs.

1. INTRODUCTION

1.1 Objective of the Environmental and Social Management Framework

In 2015, following a formal request by the Government of Mozambique (GoM), the World Bank approved a total amount of US\$40 million for the recovery of infrastructure that had been destroyed by the natural disasters that occurred at the end of 2014 and the beginning of 2015 in the central and northern regions of the country. The Financial Agreement for this funding was signed by the GoM, represented by the Ministry of Economy and Finance (MEF), and the World Bank on the 26th of October 2015. The agreement and funding will be implemented over a period of 4 years under the emergency resilience recovery project for the northern and central regions being implemented by the Government of Mozambique.

This project is related to specific existing arrangements of projects funded by the Bank, being implemented by a number of Mozambican government institutions namely: (a) the Ministry of Public Works, Housing and Water Resources (MOPHRH) through National Directorate of Management of Water Resources (DNGRH) for dyke rehabilitation under the Water Resources Development Project (WRD); (b) the National Irrigation Institute (INIR) for irrigation under the Sustainable Irrigation Development Project (PROIRRI); (c) the Administration of Water and Sanitation Infrastructures (AIAS) for drinking water supply under the Cities and Climate Change Project (CCCP); and (d) the Ministry of Education and Human Development MINEDH for climate-smart schools under the Education Sector Support Program (ESSP).

The current Environment and Social Management Framework (ESMF) is prepared as a result of the Safeguard Policies set by the World Bank (WB) as well as by the Mozambique Environmental and Social Management legal regulations which stipulate that the financing of development plans and programs is subject to an assessment and the mitigation of potential environmental and social impacts of future projects.

The ESMF is an instrument that enables the screening process to facilitate early identification of potential negative environmental and social effects associated with the future construction/rehabilitation of public infrastructure, specifically with regards to the safe location of projects, identification of issues associated with deforestation, soil erosion, pollution of soil and water resources, waste management, and other factors related to the installation, operation and maintenance of projects. The ESMF also describes the process of attaining and/or assigning environmental categories for the proposed projects, identifies potential negative environmental and social impacts, and outlines the institutional arrangements and timeframes for the implementation of mitigation and monitoring measures.

The objectives of this ESMF are to:

- Provide clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under the Emergency Resilience Recovery Project;
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social effects related to project investments;
- Determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF;
- Establish the project funding required to implement the ESMF requirements; and
- Provide practical information on resources for implementing the ESMF.

Projects are therefore required to have an ESMF which provides guidance for the preparation of an Environmental and Social Management Plan and should make provisions for how potential negative environmental and social impacts will be effectively mitigated. The ESMF, Resettlement Policy Framework (RPF) and the Pest Management Plan (PMP) will also be used as references for the elaboration of safeguards instruments related to the ERRP Program.

The ESMF includes a number of principles which will provide the following:

- A systematic procedure for a participative process of environmental and social screening of the specific project areas and activities;
- A step-by-step process to identify and prevent potential environmental and social impacts of the planned project activities;
- An environmental and social management plan to deal with arising external issues during the implementation of the project;
- A monitoring and evaluation system for the implementation of mitigation measures and actions;
- Draft recommendations for training needs required for planning and monitoring of the project; and
- A budget to ensure that the project has the necessary resources to achieve the desired objectives, particularly those related to the preparation and implementation of sub-projects/ sub-components.

The World Bank also establishes the need for preparation of a Resettlement Policy Framework (RPF) to foresee the mitigation of projects' negative social effects particularly those activities likely to cause involuntary displacement of communities or disruption of their livelihoods as per the Operational Policy on Involuntary Resettlement (OP 4.12). The policy covers direct economic and social impacts that are caused by the involuntary land acquisition resulting in impacts on, relocation, or loss of shelter; impacts on, or loss of assets; loss of income sources or means of livelihood; and/ or loss of access to locations that provide higher incomes or lower expenditures to businesses or persons.

As per the RPF, prior to undertaking of any resettlement activities, an analysis will be conducted and a Resettlement Action Plan prepared to determine positive and negative impacts

of the proposed interventions for the communities and families that will be impacted upon negatively. For purpose of this Project, a RPF is prepared as a separate document.

Similarly, the irrigation schemes project under the remit of INIR will potentially contribute to scaling-up of the production crops that would induce the use of agricultural inputs including inert chemicals to control pests. The World Bank Policy (OP 4.09) requires that a pest management plan be prepared for projects that are likely to use or induce the use of pesticides for pest control. Thus, an Integrated Pest Management plan will be prepared as an annex to the present ESMF, with a view to provide guidance on integrated pest management that places emphasis on biological methods to control pests, and minimizing the use of synthetic pesticides that have detrimental impacts upon the natural environment as well as human health.

This ESMF is structured as follows: i) introduction and the objectives of the Environmental and Social Management Framework (ESMF); ii) description of the Project; iii) an overview of the World Bank Safeguard Policies, as well as an; iv) overview of Mozambique's Environmental Policy including the country's regulatory frameworks; v) description of possible environmental and social impacts of the project as well as recommendations for mitigation measures and actions; and vi) guidelines on how the environmental and social screening process should take place.

2. PROJECT DESCRIPTION

2.1 Project Outline

The key objective of the emergency resilience recovery project for the northern and central regions is to reconstruct and rehabilitate infrastructures in priority areas that were destroyed as a result of the natural disasters that occurred and had adverse impacts in the central and northern regions of the country, in a manner that will ensure their sustainability and resilience in the long-run, and taking into account that Mozambique is a disaster-prone country and these natural disasters are recurrent. The project has four components, namely: i) Component A - Rehabilitation and reconstruction of resilient infrastructure ii) Component B - Technical Assistance for Resilience Recovery and Vulnerability Reduction; iii) Component C - Project Implementation, Monitoring and Evaluation; and iv) Component D - Related to the Contingency Emergency Response. Each of the components of the project has specific subcomponents related to the different activities to be implemented by each sector, and these are further described in the project description section of this document.

The rehabilitation and reconstruction activities will be concentrated in high risk disaster prone areas to ensure that people who live in those areas have better conditions and that the infrastructures in their areas are more resilient to shocks. The key activities will include:

- Rehabilitation of dykes;

- Rehabilitation of potable water system, rehabilitation and reconstruction of schools, irrigation and rural infrastructures such as roads, bridges and electrical power supply lines;
- Technical assistance and support for analysis in the areas of climate-smart schools, early warning systems, recovery framework and management of hydrographical basins, to ensure that capacities are built and strengthened in these areas in the long run; and
- Contingency Emergency Response in the event of an emergency.

2.2 Project Components

The Emergency Resilience Recovery Project has four components, and each of these will be implemented by the different institutions involved, under the coordination and management of the Steering Committee.

2.3 Component A - Resilient Infrastructure Rehabilitation

The activities to be financed and implemented under this component are the rehabilitation and/or reconstruction of dykes; irrigation schemes; potable water infrastructure in the Licungo River and education infrastructures. These areas were recommended in a Joint Assessment of Damage undertaken by the GoM, the World Bank, United Nations and European Union in April 2015. All rehabilitation works related to water, specifically the rehabilitation of dykes, irrigation schemes and the supply of potable water, will be undertaken in the Licungo Watershed. The rehabilitation and construction of classrooms will be undertaken in Zambezia, Niassa and Nampula provinces.

2.3.1 Sub-Component A.1 - Rehabilitation of Dykes and Damaged Weirs/ Dams

This sub-component envisages rehabilitation and strengthening of dykes and weirs, including the Nante and Nicoadala dykes and Eribacela weir, which serve as important flood protection infrastructure.

The Nante dyke extends over 30 kilometers between Nante and Intabo, and the second part of dyke is adjacent to the Licungo River. The dyke serves as a fluvial channel that protects the natural habitats, roads and agricultural land (approximately 10,000 hectares) which are used by about 54,000 people. It is expected that the Nicoadala dyke is also rehabilitated to help protect investments made on the Mziva irrigation system, under the PROIRRI Project.

Finally, the rehabilitation of the Eribacela weir will complement the works being done for the Munda-Munda scheme that will be rehabilitated under this Project. Given the urgency of this sub-component, retroactive financing will be used to ensure swift action on the rehabilitation of damaged dykes and related infrastructure.

2.3.2 Sub-component A.2 – Rehabilitation of Rural Infrastructure in the Maganja da Costa District

The work to be carried out under this sub-component will focus on the rehabilitation of irrigation infrastructures in the Maganja da Costa District. These infrastructures will include irrigation systems, rural access roads, bridges and the electricity supply line.

Out of a total of 1,850 damaged hectares, two schemes across the Maganja da Costa District are considered a priority. The two priority systems are Munda-Munda (400 hectares) and Intabo (300 hectares). The PROIRRI Project will provide support in the preparation of feasibility studies as well as in the conception of the rehabilitation works, taking into account existing contracts they have with project design and supervision companies.

The rehabilitation works of the irrigation systems will be complemented with the rehabilitation of an electricity supply line of 18 km between Nante and the systems; and a gravel road between Niquidua and Malei (including the Niquidua - Malei Bridge and structures), in order to recuperate the road access to the systems. The investment on the irrigation systems and the dykes will have a direct impact and contribution to the mitigation of the flood risks efforts already being employed by the GoM.

2.3.3 Sub-component A.3 – Rehabilitation of Mocuba Drinking Water Supply

The sub-component will focus on rehabilitating and restoring the design capacity of the intake of the Mocuba drinking water supply system, and conducting a study on the long-term and sustainable upgrade or replacement of the intake pumping station and related infrastructures.

At present, less than 5% of the Mocuba population benefits from this water supply system. Most of the population of the district depend on wells and other unsafe water supply sources. The water outlet at the Lugela River and other water supply systems in Mocuba are extremely vulnerable to floods, and these have been seriously damaged by the 2015 floods. Given the extreme fragility of the water outlet and threats from the river, only minimum investments will be made under this project, and these will be related to temporary and emergency repairs. A detailed study will be undertaken to determine and inform how the system may be upgraded or replaced in a resilient and sustainable manner.

2.3.4 Sub-component A.4 – Rehabilitation and Reconstruction of Climate Resilient Schools

This sub-component will focus on rehabilitating and constructing climate resilient schools, including: (a) rehabilitating conventional classrooms; and (b) constructing mixed-material classrooms. Given the high exposure and vulnerability to floods, storms, and earthquakes, the rehabilitation of these infrastructures should be undertaken using a multi-risk assessment

approach, in that the necessary quality is employed in the design and quality of the works to ensure that the infrastructures can bear the risks associated with natural disasters.

The works will involve the rehabilitation of 433 damaged conventional classrooms and the construction of 1,038 improved mixed classrooms to replace the conventional classrooms that were completely destroyed by natural disasters. Classrooms that will be built with mixed materials will involve participation of the community, using non-conventional materials. This component will be a pilot in terms of using new construction techniques with the aim of development more resilient structures, as recommended by the first phase of the climate-smart Schools Project. The component will focus on the identification of the best resilient construction techniques and local materials available in each of the target areas of the project; selection of appropriate design and orientation of classrooms based on hazard zones; and on-the-job training for local communities and contractors. The implementation of this component will also include the involvement of civil society organizations, with the aim of ensuring the involvement of the community throughout the life of the project.

The technical assistance component will provide support for i) the identification of better and resilient construction techniques and local materials; ii) selections of design and shape of the classrooms, considering risk zone (area of risk); and iii) on-the-job training of contractors and communities, as well as quality control.

2.4 Component B - Technical Assistance for Resilience Recovery and Vulnerability Reduction

This component focuses on enhancing the capacity to manage risks associated with natural hazards. Community engagement and outreach will also play a significant role under this component with regards to the rehabilitation of schools and early warning systems. This component will be complemented by resources from the GFDRR destined for the climate-resilient Schools project.

2.4.1 Sub-component B.1 - Improving the Implementation of Resilience School Construction

This sub-component will provide technical assistance for the rehabilitation and construction of climate-resilient schools, including for: (i) the identification of resilient construction techniques, ii) the selection of sites and the positioning of classrooms, and iii) quality assurance and quality control. The Safer Schools Project, funded under the GFDRR will complement this work.

The second phase of the GFDRR will provide support for the definition of relevant construction norms for risk zoning/ identification; the management of hazard, exposure and vulnerability information; and on-the-job training for resilient school construction. This support will be piloted in two provinces. One of the ultimate objectives is to ensure that local builders adopt

the culture of climate-smart construction for public and household infrastructures, to ensure that future natural disasters have minimal impact on the communities.

2.4.2 Sub-component B.2 – Training for Disaster Risk Management and the Recovery Framework

This sub-component will support a program of activities to strengthen the capacity of relevant government institutions and communities to manage and respond to disaster risks, including: (a) developing a proposal for rehabilitating meteorological and hydrological measurement stations and enhancing access to data in the Licungo basin; (b) rehabilitating the damaged hydro-meteorological network; (c) installing meteorological and hydrological measurement stations; (d) evaluating early warning systems and proposals for reinforcing community preparedness; (e) building the capacity of relevant national and local government institutions on early warning systems; (f) building the capacity of local disaster risk management committees to prepare emergency plans; and (g) developing a framework to enhance capacity in recovery and reconstruction.

The project will ensure that INGC and local communities have better access to hydro-meteorological information and forecasts of impact from the National Meteorological Institute (INAM) and from the DNGRH. The procurement and management of these activities shall be under the responsibility of the Ministry of Public Works, Housing and Water Resources (MOPHRH), through DNGRH, and in close coordination with the existing Transforming Hydro-Meteorological Services Project.

2.4.3 Sub-component B.3 – Study on the Licungo Watershed Management

This sub-component will be carrying out a study on watershed management in the Licungo River to reduce the vulnerability of dykes and other hydraulic works in order to develop long-term recommendations based upon a detailed understanding of the hydrology and flood return periods in the watershed. It will develop a risk model and address the question of how such damages can be minimized if a flood of similar scale were to strike again in the future. The terms of reference of the study will be elaborated after a presentation of the Initial Draft Report of the Licungo Watershed Resources Development Plan, which is being undertaken by the DNGRH at present.

2.5 Component C - Project Implementation, Monitoring and Evaluation

This component will finance Project implementation, monitoring and evaluation costs for MOPHRH (for DNGRH), MINEDH, INIR, and AIAS.

2.5.1 Sub-component C.1 – Project Implementation, Monitoring and Evaluation by DNGRH/MOPHRH

This sub-component will cover: (a) strengthening the capacity of the Project Steering Committee for overall Project coordination; and (b) strengthening the capacity of MOPHRH (DNGRH) for Project management, coordination, monitoring and evaluation, including: (i) fiduciary (i.e. financial and procurement management); (ii) environmental and social assessments; (iii) preparation of Project reports; and (iv) monitoring and evaluation.

2.5.2 Sub-component C.2 – Project Implementation, Monitoring and Evaluation by MINEDH

This sub-component will cover: strengthening the capacity of MINEDH for Project management, coordination, monitoring and evaluation, including: (a) fiduciary (i.e. financial and procurement management); (b) environmental and social assessments; (c) preparation of Project reports; and (d) monitoring and evaluation.

2.5.3 Sub-component C.3 – Project Implementation, Monitoring and Evaluation by INIR

This sub-component will cover: strengthening the capacity of INIR for Project management, coordination, monitoring and evaluation, including: (a) fiduciary (i.e. financial and procurement management); (b) environmental and social assessments; (c) preparation of Project reports; and (d) monitoring and evaluation.

2.5.4 Sub-component C.4 – Project Implementation, Monitoring and Evaluation by AIAS

This sub-component will cover: strengthening the capacity of AIAS for Project management, coordination, monitoring and evaluation, including: (a) fiduciary (i.e. financial and procurement management); (b) environmental and social assessments; (c) preparation of Project reports; and (d) monitoring and evaluation.

2.6 Component D - Contingency Emergency Response

This component will allow for an immediate response in the event of a crisis or an eligible emergency when necessary. The component will provide financing from emergencies in the event of another natural disaster, which includes a component for Contingency Emergency Response which will reduce risks of damage on infrastructure and will guarantee continuity of activities and rapid rehabilitation where required. In the event of an adverse event which creates a major disaster, the GoM may request the World Bank to channel resources through this

component for an Immediate Response Mechanism (IRM). If the activation of the IRM is deemed necessary, the MOPHRH, through the DNGRH shall be the Coordinating Authority and shall have the responsibility of coordinating and implementing the IRM. Details of this component (including activation criteria, eligible expenditure, specific implementation arrangements and staff needs for the coordination authority) will be provided in the IRM Operations Manual, and will undergo a process of consultation and authorization.

3. PROJECT IMPLEMENTATION ARRANGEMENTS

The project it will be implemented by a number of institutions working in different areas, these being: The Ministry of Public Works and Water Resources (MOPHRH), through the National Directorate of Management of Water Resources (DNGRH); the Ministry of Education and Human Development (MINEDH); the Ministry of Agriculture and Food Security (MASA) through the National Irrigation Institute (INIR); and the Water Supply and Sanitation Infrastructure Administration (AIAS). In terms of institutional arrangements, and given the multisectoral nature of the project in dealing with emergencies, it is expected that the project is implemented by existing units from the aforementioned institutions. Where specific units to deal with emergencies are non-existent, these are to be created and staff to be recruited.

The project will be managed by a **Steering Committee**, which will be led by the Ministry of Economy and Finance (MEF) and the National Disaster Management Institute (INGC). The Steering Committee has the role of coordinating, monitoring and supervising the implementation of the project. It is equally responsible for analyzing progress reports submitted by the implementation units every trimester.

The **inter-institutional coordination** role will be led by the National Directorate of Management of Water resources that was selected, and will be responsible for the day-to-day implementation and oversight of activities. The DNGRH will recruit a project coordinator and will have the role of consolidating and harmonizing the reports submitted by the different sectors. DNGRH will subsequently submit all consolidated reports to the Steering Committee as well as to the World Bank.

DNGRH has a solid and consistent project implementation structure and has been consistent in ensuring that safeguards documents for different Bank-funded projects such as National Water Resources Development Project and Flood Response Project were timely and adequately prepared prior and during project implementation. DNGRH has longstanding experience in handling projects with complex safeguards requirements. Nonetheless, due to the complexity of the ERRP safeguards requirements under the DNGRH components the project management unit was recently strengthened in several areas, including in the Safeguards capacity to specifically oversee the project throughout the lifecycle. The newly recruited safeguards specialist will work closely with the existing safeguards teams in both ARAs and DNGRH, who have extensively benefited from a series of safeguards trainings organized either by the Bank or other entities both nationally and internationally. They will work closely with

MITADER and its affiliated provincial directorates' staff and relevant partners while ensuring that ERRP safeguards recommendations are fully met throughout the project cycle.

INIR will be responsible for implementing and managing activities related to PROIRRI. INIR has representation at the provincial level and oversees policy, strategic, and operational issues related to irrigation. The project will rely upon the long-term irrigation service providers and strategic partners' setup by the PROIRRI Project for the day-to-day execution of Project activities, considering the need for a strong technical expertise on the ground for the planning, coordination, execution and monitoring of Project activities.

The PROIRRI Safeguards implementation arrangements relied heavily on the cooperation with the then MICOA, now MITADER, through the indication of safeguards focal points to oversee subproject project screening, monitoring and reporting. Whilst this arrangement was ideal to ensure the involvement of the line Ministry in Environmental Management, lack of coordination, poor allocation of resources and absence of dedicated safeguards housed at INIR (PROIRRI PCT) contributed significantly to the poor project safeguards performance. Although no major negative impacts have been reported, systematic screening, monitoring and reporting of project performance were not consistently carried out. This also meant that some of the best practices achieved by the project were not adequately captured.

The ERRP will build up on the existing structure at INIR for PROIRRI implementation, as well as the lessons from the past. Hence, the lessons learned indicated the need to hire an experienced and dedicated safeguards specialist to oversee INIR projects. The safeguards specialist will continue to work in close coordination with MITADER Focal points at both central and local levels, including with Service providers and PROIRRI's provincial coordination units under close supervision of the WBG safeguards team. A series of tailored safeguards training will be scaled up with more emphasis on screening, monitoring and reporting of safeguards indicators of the project.

MINEDH is currently resourced with a pool of experienced procurement officers, and therefore it will use existing resources for implementation arrangements and management related to the construction of the classrooms component of the project. MINEDH has much experience with Bank projects and is familiar with implementation and supervision procedures recommended under safeguards policies triggered by this Project.

MINEDH and other key stakeholders (PIU, Contractors, the Ministry of Land, Environmental and Rural Development (MITADER) and Local Administration) have been trained, through regional workshops, to improve their understanding of World Bank safeguards policies as well as the implementation and reporting requirements. More recently, (August 31, 2016) a training workshop was undertaken for relevant stakeholders including the project safeguards specialists, focusing on the relevance of safeguards in school construction, and the environmental and social screening process towards the ESMP. Trainings were also provided to Third Party Providers (TPPs) to align the basic safeguards requirements throughout the project implementation. MINEDH has two safeguards specialists (social and environmental)

in the PIU who have gathered considerable skills and competencies required to ensure the compliance of the safeguards policies. The two safeguards specialists will continue to work under close guidance and supervision from the World Bank safeguards team.

The ESMPs have constituted an integral part of the ESC (Environmental and Social Clauses) for the civil works contracts entered into by MINEDH. In addition, screening, monitoring and reporting forms were prepared and tested in each province prior to the series of regional safeguards trainings and the forms are now annexed to the ESMPs. No major impacts have been reported and best practices related to environmental and social aspects have been adopted by MINEDH, there include the preservation of native trees in the schoolyard; integration of female workers in the construction process; and the integration of appropriate ramps to allow accessibility for disabled persons to mention a few.

AIAS will also use existing implementation arrangements and share resources from other projects. AIAS is responsible for the provision of urban water infrastructure all urban apart from large cities and sanitation infrastructure, including drainage across the country. A separate Project Agreement will be required for AIAS, as this is an independent agency with financial and procurement autonomy.

AIAS has a solid and consistent project implementation structure and has since been consistent in ensuring that safeguards documents for different Bank-funded projects were timely and adequately prepared prior to project implementation. AIAS has longstanding experience in handling projects with complex safeguards requirements. In addition, the Safeguards Specialist based at AISA has extensively benefited from a series of safeguards trainings organized either by the Bank or other entities both nationally and internationally. The specialist will be key in ensuring that ERRP safeguards recommendations are fully met during throughout the project cycle.

Although sub-component of this project will be implemented by different entities, it is of utmost importance that the project is managed correctly to ensure coherence as well as to ensure that the objectives and the expected results of the project are met. Each entity involved in the project cycle, including the coordinating functions of the MOPHRH and the Steering Committee, have a key role and responsibility in the timely implementation of activities, in monitoring and evaluation, as well as in the submission of reports.

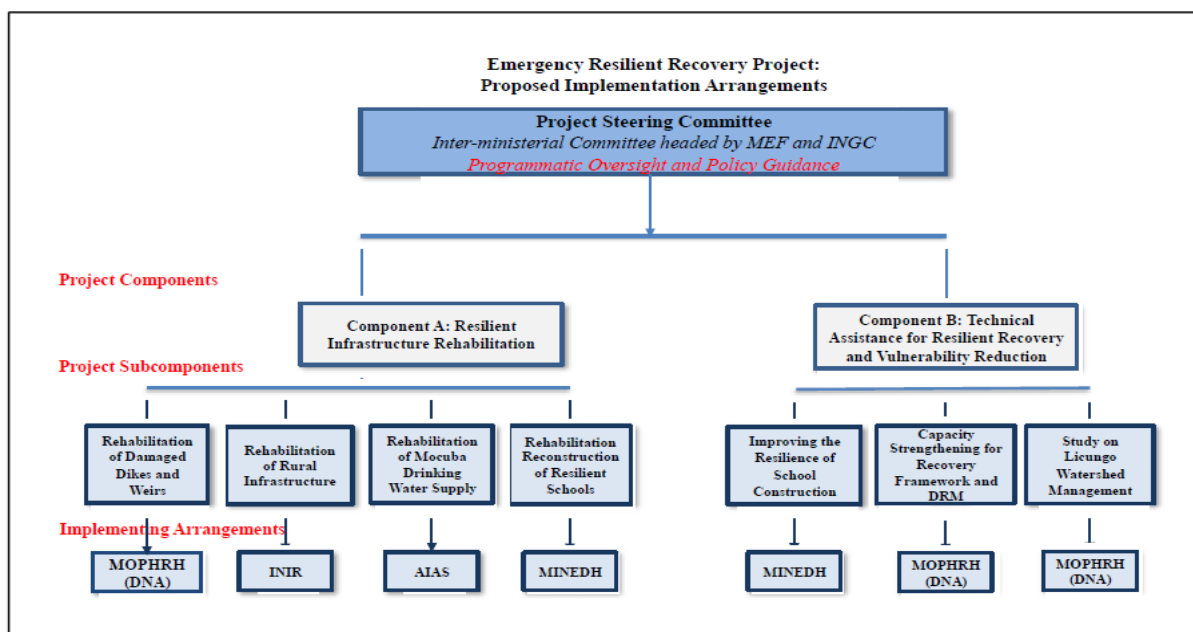


Figure 1: Implementation Arrangements

Source: World Bank, Project Appraisal Document for Emergency Resilience Recovery Project for the northern and central regions

4. TARGETED PROJECTS AREAS

4.1 General Description of Context in Mozambique

Mozambique comprises a national territory of 799,380 km² of which 2% consist of inland water bodies, 13% national parks, and 21% of forest cover. The country is located in the eastern region of the sub-Saharan Continent, bordering Tanzania in the North, Malawi, Zambia and Zimbabwe in the West, South Africa and Swaziland in the South and the Indian Ocean in the eastern part which encompass a 2,500 km of coastline and an exclusive economic zone of 200 nautical miles. The country has thirty-nine major rivers which drain into the Indian Ocean, and an impressive natural environment, which constitutes a significant public asset and is the basis upon which its recent macro-economic development and poverty reduction has been achieved. All the key sectors of the Mozambican economy (i.e. agriculture, mining, tourism, forestry, fisheries and wildlife) are based on natural resources. Mozambique's rich ecosystems, biodiversity and natural resources hold a significant exportable value and commercial potential.

It is of upmost importance to highlight that despite these impressive environmental and agro-ecological climate of Mozambique, the country is extremely vulnerable to natural disasters namely; floods, drought, and cyclones due to its geographic location, its climate conditions, extremely high levels of poverty and exposure of people to these disasters as well as the limited availability of resources in the country to build resilience. Mozambique is considered the second country most geographically exposed to natural disasters in Africa. The recurrence of natural disasters in the country annually have adverse impacts not only on the human lives, but also on human livelihoods, infrastructure and hamper development and investments efforts. This is particularly evident with the floods that occurred in 2014 and 2015, that had negative impacts in the central and northern regions of the country, particularly in the proposed project areas (Zambezia, Niassa and Nampula). More recently with the El Nino phenomena which started at the end of the last quarter of 2015, natural disasters have been affecting parts of the country, hitting particularly the southern and central regions of Mozambique with droughts and floods. According to the Vulnerability Assessment carried out by the Food Security and Nutrition Technical Secretariat (SETSAN), in March 2016, El Nino has affected close to 1.5 million people, and humanitarian needs in terms of food assistance, severe and acute malnutrition treatment as well as in terms water, hygiene and sanitation have been prioritized for the affected groups.

Albeit significant advances have been achieved in Mozambique over the last decade in terms of improvements in the social sectors (i.e. health and education) as well as in the general economy (with an annual GDP of 7-8% until 2015), the country continues to be amongst the poorest in the world and almost close to half of the population lives in poverty. The 2015 Human Development Index ranked Mozambique 180 out of 188 countries. Access to adequate health and education services and other facilities remain challenging, particularly with the fast population growth rates. Access to potable water, and infrastructures such as roads, bridges

and electrical power is also increasing at a very slow pace and reaching less than 40% of the Mozambican population.

The ERRP offers an opportunity for early warning and flood control systems in areas that are susceptible to floods, awareness raising on climate change and its adverse effects, and ensuring that all development projects consider resilience to shocks and disasters. The result of this will be that the population of Mozambique in general will not be exposed to detrimental environmental and climate change effects and there will be no major losses of investments during the development process.

4.2 Project Locations

The Emergency Resilience Recovery Project has been designed to be implemented over a 4-year period, in specific provinces in the central (Zambezia) and northern (Niassa and Nampula) regions of Mozambique. The provinces of Zambezia, Niassa and Nampula were identified and selected because they were particularly adversely affected by the impacts of natural disasters of 2014 and 2015 and considering the need for reconstruction and rehabilitation of infrastructures because of these disasters. The three provinces have been exposed to flooding, strong winds, erosion, and a combination of these hazards, which have created significant damages accounting for severe losses and damage to human lives, livelihoods and infrastructure. In total, the three provinces have about 11.5 million inhabitants, which is reported to account for approximately 44 percent of the country's population. The three provinces also have extremely high incidences of poverty, and subsequently are amongst the provinces with poorest population in Mozambique.

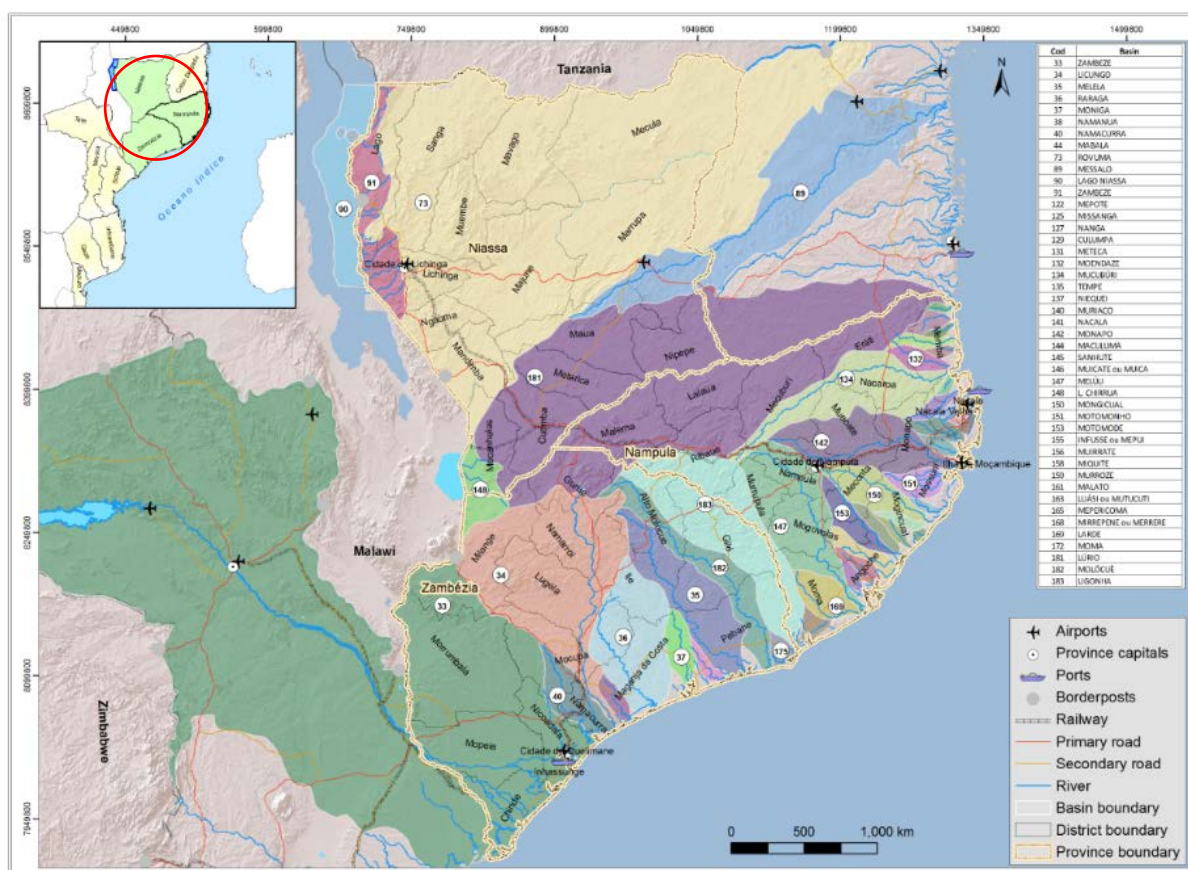


Figure 2: Map of Project Areas (project areas within the red circle)

4.2.1 Zambezia

Zambezia province is the second most populous in Mozambique, with a projected population of 4.5 million (INE 2010), and has an area of 103 127 km², mostly covered by the Zambezi and Licungo Rivers and their tributaries. The province is located in the central-northern region, bordering Sofala, Tete, Niassa and Nampula provinces. The capital of Zambezia is Quelimane. The province is divided into 16 districts, of which at least 3 will be covered by the ERRP, these being Maganja da Costa, Mocuba and Nicoadala where most of the activities under sub-component A.1 of the ERRP targets. Specific sub-projects identified to be implemented in Zambezi include the rehabilitation of dykes and weirs, reconstruction of rural infrastructures (roads, bridges and electrical power) linked to the irrigation schemes of Munda-Munda and Mziva, and the rehabilitation of the Mocuba water supply system. The rehabilitation and reconstruction of resilient schools will also be undertaken in the Zambezia province, in flood-prone districts still to be identified.

Zambezia has a tropical climate with two annual seasons dominated by rains. Between May and September, the climate is generally cold, and from November to March it is the raining season. The rest of the year, October to April, is considered the transition period. The province is subdivided into two ecological zones: i) “Alta Zambezia”, located in the northern interior of the country, with moderate climate conditions and generally low temperatures. In this region

forestry is the predominant activity; and ii) “Baixa Zambezia” located in the coastal and southern region of the province. This region is characterized by very high and humid temperatures, and is susceptible to floods in the coastline, in the margins of the Licungo River and in the delta of the Zambezi River. The province has ideal agro-climatic conditions, fertile soils and is endowed with water resources.

Zambezia, like most provinces in Mozambique, has a predominantly agriculture based economy, and because of the characteristics of the province, particularly of Baixa Zambezia, the agriculture season is cyclically affected by floods. Natural resources, timber and minerals, also contribute largely to the income of the province.

Zambezia is reported to have about 200 health units (including the provincial hospital based in the capital Lichinga, health centres and health posts in urban and rural areas). In relation to health indicators, Zambezia is reported to have high levels of malaria, diarrhea, and water-borne illnesses because of the humid climatic conditions and the occurrence of cyclical floods. The HIV/ AIDS prevalence rate for the province was of 12.6% in 2009

Education levels in Zambezia provinces are still very low as close to 70% of the provinces population is illiterate. Access to schools, as in the rural setting throughout the region, is also very low. Another reason for the poor education levels in the province are recurrent natural disasters which disrupt attendance of school by children for various reasons including temporary resettlement due to destruction of their homes and destruction of the schools themselves.

Although Zambezia province is endowed with water resources (due to the rivers that flow in the province) access to potable water is a major issue. No community located in the rural areas of Zambezia have access to a piped water network, and most of the population in these areas collect their water from water pumps, boreholes or directly from rivers.

4.2.2 Niassa

Niassa is Mozambique's largest province with an area of 122,827 km², covering approximately 16 per cent of the country's total area and remains one of the world's last genuine wildernesses. On the other hand, Niassa has a population of 1,027,037 and is the most sparsely populated province in the country. The Ruvuma River forms much of the northern boundary of the province with Tanzania while Lake Niassa forms the western border of the province, separating it from Malawi. The province shares borders with Zambezia, Nampula and Cabo Delgado. It has 15 districts and Lichinga is the capital of the province. For Niassa, the key activities under the ERRP will involve the rehabilitation and reconstruction of climate-resilient schools. Vulnerable and risky areas will also be contemplated for the province in the event of an emergency, which will trigger the implementation of the component on contingency emergency response. The districts of focus will be defined during the preparation and implementation phases of the project.

Niassa's climate is based on two annual seasons, humid and dry, and is predominantly rainy with an annual precipitation that varies between 800 and 1,800 mm, mostly in October and March. The province has three hydrographic basins: the Rovuma Basin, the Zambezi and Lúrio Basin. Because of these hydro-climatic conditions, Niassa is extremely susceptible to floods.

Niassa's economy is predominately based on agricultural which is the main source of employment and incomes for the rural population of the province. Apart from agriculture, Niassa's income is largely dependent on natural resources, with forestry and livestock also making major contributions to the development of the province.

In terms of health services, the province is said to have 137 health units (including the provincial hospital based in the capital Lichinga, health centres and health posts in urban and rural areas). All district capitals have maternity wards. All health units have a source of water which are also used to supply surrounding communities. In that last few years Niassa has seen an increase in diseases such as malaria, cholera, tuberculosis and HIV/AIDS resulting from several issues including influx of people, natural disasters, unhygienic practices and poor sanitation, to mention a few. In 2004 Niassa is said to have had an HIV/AIDS prevalence of 11.1%, and the districts with the highest prevalence were Cuamba, Mandimba, Maua, Lichinga and Maua, given their proximity to urban areas, to Malawi, and road corridors.

In terms of education and access to schools, the situation in the province is improving, however very challenging given the dispersed population and distances between communities. Niassa is said to have total of approximately 876 schools (covering all levels from primary to secondary education).

The province has 1,285 sources of water, of which 1,116 are operational and is reported to have a coverage of 64% of drinkable water in 2006 – his number might have increased significantly with the new water supply system built in Cuamba. As with the education and health networks, coverage and access to water sources for the vast population is a challenge given the size of the province, the low and dispersed population density.

4.2.3 Nampula

The province of Nampula is located in northern Mozambique, sharing borders with the provinces of Cabo Delgado to the north-east, Niassa to the north-west and Zambezia to the south, with a population of 3.9 million people (2007 Census), and an area of 79,010 km². The province's population growth rate is 2.39 % and the population's total life expectancy is 37 years. Gross birth rate is high at 41.7%, but it is offset by a high mortality rate of 27.3%.

Nampula has a humid tropical climate, very similar to that of Zambezia province, characterized by a hot and rainy period that goes from November to March and a dry season that goes from May to October. The average temperature is 24.7 °C and the annual average rainfall amount is 1095 mm. The month of September which is the driest, reaches up to 7 mm of rainfall and January is the most humid with average of 241 mm. The province is well endowed with rainfall,

averaging 1059 mm per year, and is considered one of the most productive areas in the country, and is normally divided into a coastal, a central and an interior region with reference to environmental and economic characteristics. Agriculture is the dominant economic activity, historically with a mixture of small-scale, mainly subsistence agriculture and larger units producing cash crops such as cotton, cashew and tobacco (DNPO 2000; Cruzeiro do Sul 2002; EIU 2006). At the coast, fishing and coconut farming are additional important sources of subsistence and income. Except for agricultural processing plants, there is only a small number of larger industrial enterprises in Nampula. The principal port for the province is Nacala on the northern coast of the province. Tourism is not yet developed, but the historically important Ilha de Mozambique (i.e. Mozambique's first capital) draws many visitors on annual basis to the province.

Like Niassa, Nampula is also one of the largest territories in the country, and is the most populous. It is bordered on the north by Cabo Delgado Province, Niassa Province on the northwest, Zambezia Province on the southwest, and the Indian Ocean to the east. The province has 18 districts, and the capital is Nampula. Similar to Niassa, key activities under the ERRP in Nampula will involve the rehabilitation and reconstruction of climate-resilient schools. Vulnerable and risky areas will also be contemplated for Nampula in the event of an emergency, which will trigger the implementation of the component on contingency emergency response. The districts of focus will be defined during the preparation and implementation phases of the project.

Nampula province has 11% of the country's surface area (81,000 km²), 21% of the population: (4.1 million), 14% of the national GDP. Nampula's economy is predominantly based on agriculture and commerce (71% of the province's GDP). The region is a major producer of cotton, and is known as the Cotton Belt of Nampula. Also produced in the province are cashew nuts, tobacco, gems and other minerals. Many of the cotton and tobacco farms in Nampula Province are state-owned.

Agriculture is the main economic activity in the province of Nampula and is complemented by the creation of small domestic animals (especially poultry). The potential for the development of agriculture is 4 500 000ha for rain-fed agriculture, 74 000ha for irrigated agriculture and to 83 000ha for forestry. Nampula also have favorable conditions for livestock husbandry practices, especially in bovine, goat, sheep and poultry in the districts of Mogovolas, Moma, Angoche and Nampula-Rapale which have some infrastructure for the expansion of the activity.

In terms of education, Nampula is considered to have the highest illiteracy rates in the country. Some of the contributing factors for this include high population growth in the province, high levels of rural migration especially of the young population looking for better living conditions, the lack of coordination across sectors as well as weak monitoring and evaluation (Participant of Public Consultation Meeting).

One of the major challenges of the education sector in the province, as communicated during the public consultation meeting, is that of lack of spaces in the urban areas of the province (such as in Nacala-Porto) for the reconstruction of schools that were destroyed by climate change induced shocks. Recurrent climatic-shocks in some areas of the province are also a major hindrance to the school calendar and negatively affect teaching and learning conditions, particularly where classrooms are destroyed.

Data from 2007, of the human development index report, shows that Nampula is the third worst province in the country with respect to Human Development Index (HDI) (2.24), Human Poverty Index (HPI) (53.6), and life expectancy at birth (44.3 years), ahead only of the provinces of Cabo Delgado and Zambezia. Nampula is the fifth worst province with respect to poverty incidence (69% of the population), and children vulnerability. More than 92% of the population does not have access to electricity, 78% are deprived of access to radio and clean water, and 75% has no access to health assistance. Nampula is the third province with respect to adult illiteracy rate (64% in 2007), and is the province with the lowest gross and net rates of enrolment amongst the population in schooling age, both in the primary and secondary levels. In the primary school, for each teacher there are, on average, 61 students.

Estimates from the Ministry of Health indicate that the rate of prevalence of HIV/AIDS in Nampula was 8% in 2007 (table 4b), which is similar to the national average. It is estimated that the impact of this, and other endemic illnesses such as malaria, have a very significant negative impact on the ability of the families, particularly of the poorer and more vulnerable, to engage in income generation and poverty reduction activities. For example, it is known that the incidence of malaria is higher and more devastating during the sowing (raining and hot) season, when peasants also are less well fed and need more energy for the heavy work ahead. It is expected that HIV/AIDS will have a very significant demographic impact, with all its subsequent economic and social consequences.

The potable water supply network in Nampula still does not cover much of the population. According to INE data only 32% of the population of the province has access to safe drinking water. Some of the reasons for this include scarcity of infrastructures as well as limited availability of resources for expansion.

5. PUBLIC CONSULTATIONS

Public consultations were carried out in the three provinces which are targeted by the ERRP, namely in Nampula, Niassa and Zambezia, as well as at the central level of the country, with the objective of gathering public perceptions of the proposed activities as well as of the provinces and key areas of intervention. The consultation process comprised two methods (i) consultation on a one-to-one basis with key stakeholders (officials from line ministries, national organizations, NGOs, the World Bank and technical staff from targeted provinces), and (ii) public meetings held in the aforementioned provinces. Information on the purpose and dates of the public consultation meetings was publicized in the *Jornal Noticias*, the most widely read

newspaper in the country, in the DNGRH office in Maputo, as well as at provincial level. A draft version of the present document, ESMF, were also shared and made available to the public for contributions.

The objective of the consultation process was to gather general perceptions and views of all relevant stakeholders (project affected persons as well as interested persons) on the proposed project. Among others, the Consultant sought to identify and confirm conditions in the different provincial contexts, and determine specific impacts that would require to be addressed under the scope of the present ESMF. A summary of the key issues raised and contributions from the public consultation meetings held in the 3 provinces is provided below.

5.1 Consultations in Nampula

In Nampula province, the public consultation meeting took place on November 9, 2016, in the capital of the province, Nampula City. The meeting was well attended by civil society organizations, the general public, as well as by local government officials. The participation of officials from 13 District Education Services in the meeting is worth highlighting, most of which are focal points for emergency projects in highly vulnerable districts exposed to recurrent natural disasters. Senior officials from the DNGRH also participated in the meeting. The meeting was conducted and led by a consultant appointed for this, and had three main objectives: i) provide information to the ERRP beneficiaries, to the general provincial population to civil society organizations as well as to the local government structures; ii) identify potential environmental and social consequences and impacts of the project; and iii) take note of and register the contributions, grievances and expectations of the participants with regards to the project.

Key issues raised by Participants

In terms of the area of focus of the project, the key issues raised by participants included the following:

- In urban areas of the province, such as Nacala Porto, there are major difficulties in obtaining physical spaces for the resettlement or reconstruction of schools. Resettlement of schools will require the payment of compensation for land.
- The lack of fencing around school infrastructures is a major challenge for the education sector, leading to land conflicts as land is lost and it is difficult for the schools to claim it back.
- Challenges in inter-institutional communication, districts provide information of climate related shocks as well as their impact on infrastructure to the provincial directorates, however information does not reach the correct entity.
- Recurrent disasters in the same areas, destroying infrastructures, particularly schools, however they are not transferred.
- Non-compliance with construction of resilient schools' model in terms of their location, construction materials used, obtaining of construction licenses.

- Some affected schools in the province resort to continuing classes under trees under unsuitable conditions for pupils and teachers.
- Liupo, Larde, Memba districts are of major concern given their exposure to constant cyclones and floods, it was reported that with the 2014/15 flood, several classrooms in both districts were destroyed.
- Low quality construction materials being used by some contractors, particularly zinc sheets used for roofing.

Key Recommendations Provided

- Need for capacity building of communities and local artisans on improved construction methods and use of resilient construction materials.
- Resettlement of schools should not be to locations far from the destroyed schools to minimize drop-outs because of long distances pupils have to walk to get to schools. Relocation of schools to safer locations in the same locality, community or neighborhood should be prioritized.
- Improve quality of classrooms built to ensure that they are resilient to climate-shocks and that they last longer.
- Strengthen monitoring and supervision of construction to ensure quality assurance as well as compliance with contracts.
- Identify locations to attain wood for construction of classrooms.
- Inclusion of HIV/AIDS, and other sexually transmitted infections, awareness component in the project as prevalence rates are increasing.
- Fencing of schools
- Elaboration of guidelines on monitoring and inspection of infrastructures being built.

5.2 Consultations in Niassa

In Niassa province, the consultation took place on November 11 in the capital city Lichinga. As in Nampula, the meeting was well attended by civil society organizations, the general public as well as by local government officials. Senior officials from the DNGRH also participated in the meeting. The meeting was conducted and led by a consultant appointed for this, and had three main objectives: i) provide information to the ERRP beneficiaries, to the general provincial population to civil society organizations as well as to the local government structures; ii) identify potential environmental and social consequences and impacts of the project; and iii) take note of and register the contributions, grievances and expectations of the participants with regards to the project.

Key issues raised by Participants

In terms of the area of focus of the project, the key issues raised by participants included the following:

- Issues with local communities not receiving compensation repayments in the province.

- Frequent loss of community land to projects.
- Low quality of construction and construction materials being used by contractors.
- The use of local labour is not always favorable as the schedules of the contractors and local communities are not always compatible, particularly during the agriculture production season.
- Lack of baselines on soils and climate of construction sites cause technical errors during construction.
- The northern region of the province is hardly affected by natural hazards.

Key Recommendations Provided

- Strengthen monitoring, inspection and supervision of construction to ensure quality assurance as well as compliance with contracts.
- Inclusion of environmental and social safeguards in order (*cadernos de encargos*) for contractors to budget for and comply with environmental mitigation measures.
- Public consultations should be undertaken at local levels, at the exact locations where the project will be implemented.
- Studies on climate, soils and terrains should be undertaken prior to commencing construction as these have an impact of the quality of the infrastructures.
- Resettlement of schools should not be to locations far from the destroyed schools to avoid drop-outs because of long distances pupils have to walk to get to schools. Relocation of schools to safer locations in the same locality, community or neighborhood should be prioritized.
- Improve inter-sectoral coordination.

5.3 Consultations in Zambezia

The consultation meeting in Zambezia took place in Quelimane on In Niassa province, the consultation took place on November 11 in the capital city Lichinga. As in Nampula, the meeting was well attended by civil society organizations, general public as well as by local government officials. The meeting was conducted and led by a consultant appointed for this, and had three main objectives: i) provide information to the ERRP beneficiaries, to the general provincial population to civil society organizations as well as to the local government structures; ii) identify potential environmental and social consequences and impacts of the project; and iii) take note of and register the contributions, grievances and expectations of the participants with regards to the project.

Key issues raised by Participants

- What will be the link between the ERPP and the district adaptation plans (where districts have these), will activities from the ERRP be included in the plans?
- Lack of alternatives for water retention.
- Low quality of construction materials being used by contractors.

- Soil erosion adversely impacting education facilities.
- Land conflict resulting from the use of unapproved areas for the reconstruction of dykes.
- Rupture in social cohesion as a result of resettlement and the payment of compensation.

Key Recommendations Provided

- Inclusion of HIV/AIDS, and other sexually transmitted infections, awareness raising component in the project as prevalence rates are increasing.
- Provision of basic services in resettlement areas for project affected populations to prevent return to areas of high risk.
- Improved inter-ministerial and inter-institutional coordination for implementation of projects is required.
- Make provisions around quality of the final product in the contract with the contractor.
- Inclusion of environmental and social safeguards in order (*cadernos de encargos*) for contractors to budget for and comply with mitigation measures.

In general, the issues raised by the participants of the public consultation have been taken note of and included throughout the present document. The ESMP also includes recommendations informed by these meetings.

6. WORLD BANK SAFEGUARD POLICIES

The World Bank Environmental and Social Safeguard/ Operational Policies are critical for the institution's support to poverty reduction in a sustainable manner, and involving affected and interested parties of the project. The objective of these safeguard policies is to prevent and mitigate loss and damage on human life as well as on the environment during the implementation of development activities. These policies provide the Bank and its partners with guidelines for identifying, preparing and implementing programs and projects, and are applied to manage environmental and social risks and adverse impacts. In this section World Bank Operational Policies that can be triggered by the project are reviewed. The purpose of this review is to ensure that the proposed project concept is environmentally and socially sound, and to assess the relevance and feasibility of implementation of these policies to the proposed project.

The ERRP has the potential of triggering most of the policies because of the nature and objective of the project related to the reconstruction and rehabilitation of infrastructures such as rural access roads, bridges, schools, and water supply systems, as well as reconstruction and/or improvements of irrigation schemes, which are likely to cause certain negative environmental and social effects.

Table 1: World Bank Safeguard Policies Triggered by the Project

Safeguard Policies Triggered	Yes	No
Environmental Assessment (OP/BP 4.01)	X	
Natural Habitats (OP/BP 4.04)	X	
Pest Management (OP 4.09)	X	
Indigenous People (OP/BP 4.10)		X
Physical Cultural Resources (OP/BP 4.11)	X	
Involuntary Resettlement (OP/BP 4.12)	X	
Forests (OP/BP 4.36)		X
Safety of Dams (OP/BP 4.37)		X
Projects on International Waterways (OP/BP7.50)		X
Projects in Disputed Areas (OP/BP 7.60)		X

The components under the Project that will trigger environmental safeguard policies are Component A – Resilience Infrastructure Rehabilitation, and Component D – Contingency Emergency Response Component (CERC). The WB’s Operational Policies triggered by the project are described below.

6.1 Environmental Assessment OP 4.01

The aim of the Environmental Assessment (EA) Safeguard is to ensure that projects are environmentally and socially sustainable, and provide a basis for improved decision making. The Environmental Assessment evaluates a project's potential environmental risks and impacts in its area of influence; examines project alternatives; identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation.

The EA takes into account the natural environment (air, water, and land); human health and safety; social aspects (involuntary resettlement, indigenous peoples, and physical cultural resources); and trans-boundary and global environmental aspects. It also considers natural and social aspects in an integrated way, and taking into account the variations in project and country conditions; the findings of country environmental studies; national environmental action plans; the country's overall policy framework, national legislation, and institutional capabilities related to the environment and social aspects. Thus, OP 4.01 is applicable whenever a proposed project or actions have the potential to cause negative environmental effects to its surroundings.

The OP 4.01 classifies proposed projects into one of three categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts:

Category A: where a project is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. For a Category A project, the borrower is responsible for preparing a report, normally an Environmental Assessment (EA), (or a suitably comprehensive regional or sectorial EA).

Category B: where a project's potential adverse environmental impacts on human populations or environmentally important areas such as wetlands, forests, grasslands, and other natural habitats are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigation measures can be readily designed.

Category C: where a project is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required for a Category C project.

Category FI: A proposed project classified in Category FI engages investment funds from the World Bank through a financial intermediary, in subprojects that may result in adverse environmental impacts.

The ERRP project has been assigned *Category B status*, as the activities will result in moderate impacts that will be localized and easily mitigated. Implementation may have potential negative environmental and social impacts and are likely to result from infrastructure rehabilitation and construction activities, as well as with the implementation of the Contingency Emergency Response component. Some of the adverse impacts include soil erosion, soil, surface and groundwater pollution, air pollution, loss of vegetation, public health impacts such as traffic hazards, noise, dust, and disruption of social and cultural practices. The present ESMF is elaborated to focus on these potential effects likely to occur during the implementation of the foreseen activities in the project areas.

It must be expressly stated that the current funding for the ESMF is for the Category B project as per determinations in our preliminary assessment of the project sites and anticipated impacts and environmental considerations. We do not foresee any chance of the scope of the project changing drastically into that of a category A project (i.e. which requires a much more comprehensive assessment of environmental impacts given the anticipated environmental health and socioeconomic impacts).

This ESMF presents checklists that are designed to assist in identifying such potential impacts, and direct communities and extension teams about practical ways of avoiding or mitigating them. Should district or provincial government authorities determine that more detailed studies are required, they can request that an environmental and social assessment be carried out and that an Environmental and Social Management Plan (ESMP) be prepared before the project application can be considered further in compliance with OP 4.01. The ESMP should consists

of a set of mitigation, monitoring and evaluation measures that should be taken during implementation and operation, to eliminate or mitigate any adverse environmental and social impacts. The ESMP should also include actions required to be undertaken to implement the recommended measures.

The present ESMF includes a template to prepare an ESMP for the ERRP to provide guidance to the implementers, coordinators and project proponents. It provides set of responses to potential adverse impacts, determines requirements for timely and effective response, and provides the means for meeting the requirements set. The key components of this plan are i) mitigation; ii) Environmental and Social Clauses (ESC) for contractors; iii) monitoring, iv) training and capacity development, v) projected costs for implementing the plan; and vi) integration of the plan to the project.

6.2 Natural Habitats (OP/BP 4.04)

The Natural Habitats safeguard is related to the protection, maintenance, and rehabilitation of natural habitats and their functions in its economic and sector work, project financing, and policy dialogue. The objective of this safeguard is to ensure that a precautionary approach to natural resource management is applied to ensure opportunities for environmentally sustainable development.

The Bank does not support projects that involve a significant conversion or degradation of critical natural habitats unless there are no feasible alternatives for the project and its siting. For these to be approved, a comprehensive analysis demonstrates that overall benefits from the project substantially outweigh the environmental costs. If the environmental and social assessment indicates that a project would significantly convert or degrade natural habitats, the project should include mitigation measures acceptable to the Bank. Such mitigation measures should include minimizing habitat loss (e.g., strategic habitat retention and post-development restoration) and establishing and maintaining an ecologically similar protected area. Wherever feasible, Bank-financed projects should only be sited on lands already converted.

The ERRP will have a small impact on Natural Habitats as it will mainly be implemented in areas where existent activities are already taking place, such as the small-scale reconstruction of schools and of water supply sources. Where medium scale works are envisaged, such as the reconstruction of irrigation schemes and rural access roads and bridges as well as the contingency emergency response, the OP 4.04 is triggered and precaution measures need to be put in place to avoid damage to the environment. Proper planning is required regarding site selection and should always avoid areas requiring transformation of undisturbed natural habitat.

The ESMF provides communities and implementation teams with the appropriate environmental checklists and planning methods to identify any potential impacts of the project sub-components on natural habitats and to develop appropriate mitigation measures to minimize or avoid damage.

6.3 Pest Management (OP 4.09)

The objective of the Pest Management safeguard is to minimize and manage the environmental and health risks associated with pesticide use and promote and support safe, effective, and environmentally sound pest management. The Bank allows for a pest management that affects agriculture or public health, through the promotion of the use of biological and environmental control methods, reducing the use of synthetic chemical pesticides.

For agriculture, the Bank requires an assessment of pest management and supports the use of Integrated Pest Management (IPM) involving careful consideration of all available pest control techniques that are economically justified and which or minimize risks to human health and the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms. The Bank may finance the purchase of pesticides when their use is justified under an IPM approach

Where public health projects are in question, the Bank supports controlling pests primarily through environmental methods. If environmental methods alone are deemed not to be effective, the Bank may finance the use of pesticides for control of disease vectors.

The criteria for pest selection and use is contingent on an assessment of the nature and degree of associated risks, considering the proposed use and the intended users. With respect to the classification of pesticides and their specific formulations, the Bank refers to the World Health Organization's (WHO) *Recommended Classification of Pesticides by Hazard and Guidelines to Classification*. The following criteria for the selection and use of pesticides in Bank-financed projects apply: a) have negligible adverse human health effects; (b) there must be evidence that they are effective against the target species; (c) must have minimal effect on non-target species and the natural environment; and (d) their use must consider the need to prevent the development of resistance in pest.

The Bank requires that any pesticides it finances be manufactured, packaged, labelled, handled, stored, disposed of, and applied per standards acceptable to the Bank. The Bank does not finance formulated products that fall in WHO classes IA, IB or II, of which the country lacks restrictions on their distribution and use; or they are likely to be used by, or be accessible to, lay personnel, farmers, or others without training, equipment, and facilities to handle, store, and apply these products properly.

The project may trigger the Pest Management safeguard, for both agriculture and public health, during the implementation given the areas support involving irrigation schemes, classrooms, and water supply systems reconstruction works. This ESMF also include a PMP as an annex.

6.4 Physical Cultural Resources (OP/BP 4.11)

This policy addresses preserving Physical Cultural Resources (PCR), and in avoiding their destruction and/or damage. Physical cultural resources are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious (including graveyards and burial sites), aesthetic, or other locations with cultural significance. They may be located in urban or rural settings, and may be above or below ground, or under water. Their cultural interest may be at the local, provincial or national level, or within the international community.

The project should address any possible impacts on physical cultural resources in projects proposed for Bank financing, as an integral part of the environmental assessment (EA) process. If the project is likely to have adverse impacts on physical cultural resources, the project proponent should identify appropriate measures for avoiding or mitigating these impacts as part of the EA process. At this stage, it cannot be ascertained whether some ERRP target areas are located in or nearby natural features and landscapes. Should this be confirmed during the specific identification and selection of sites, the Chance Finds Procedure (CFP) approach shall be used in the event of previously unknown physical cultural resources are exposed or found in the lifecycle of a project, and appropriate measures should be taken to ensure that natural features and landscapes are not destroyed, and/or that mitigation measures are put in place to reduce damage. Furthermore, future activities related to component D may trigger this safeguard, particularly in relation to religious sites such as family graveyards and burial sites. Chance find refers to any cultural heritage site or associated material encountered during construction works, excluding those found in the course of an intentional archaeological investigation. It includes, but is not limited to artefacts, archaeological deposits, ruins, monuments and human remains.

Potential adverse impacts and specific mitigation measures have been provided in the ESMP and the ESMF mitigation matrix included in this document. The RPF being prepared in parallel to this document, presents the guidelines for management of physical cultural resources in the Environmental Assessment and provides a plan for mitigating adverse impacts.

6.5 Involuntary Resettlement (OP 4.12)

The purpose of this policy is to avoid or minimize involuntary resettlement and, where this is not feasible, assist displaced persons in improving or at least restoring their livelihoods and standards of living in real terms relative to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.

OP 4.12 applies to all land acquisition and any changes in access to resources due to a sub-project. The policy applies whether or not affected persons must move to another location. The Bank's policy requires a full Resettlement Action Plan (RAP) if over 200 people must be relocated or if these people are not physically displaced but lose over 10% of their assets due to the project. If the impact is less than this an Abbreviated Resettlement Action Plan should be prepared instead.

The key objectives of this operational policy are to:

- Avoid or minimize involuntary resettlement scenarios, where possible and examine all viable alternative project designs;
- Support affected persons in restoring/improving their former living standards, income generation and production capacities, or at least in restoring them;
- Encourage community involvement in planning and implementing resettlement actions, and
- Provide assistance to affected people regardless of the legality of land tenure.

The policy does not only cover physical displacement, but also any loss of land or other assets associated to the proposed actions resulting in:

- relocation or loss of shelter;
- loss of assets or access to assets; and
- loss of income sources or means of livelihood, whether or not the affected person is to reallocate to a new area.

This operational policy is applicable to the involuntary restriction of access to legally demarcated conservation areas such as parks and other protected areas resulting in adverse impacts on the livelihoods of the displaced persons. For the purpose of the RPF prepared under the remit of the Emergency Resilience Recovery Project, whenever land acquisition is necessary for the foreseen public-works, the applicant (any of the institutions with a mandate to implement under this project) shall comply with guidance established by the RPF which has been prepared separately and in parallel to the present ESMF.

The nature and scale of sub-components of the ERRP proposed means that only minimal displacement, and subsequent need for relocation and/or compensation, is likely to occur as a consequence of project implementation. Nevertheless, the ESMF provides criteria for determining the need for resettlement in the form of Checklist. Additionally, a Resettlement Policy Framework (RPF) has been also prepared for the ERRP and complements this ESMF with regards to involuntary displacement.

6.6 World Bank Policy on Disclosure of Information

The World Bank, through its Disclosure Policy BP 17.50, requires that all safeguard documents be disclosed in the respective countries as well as at the Bank's Info shop prior to appraisal or for Fast Tracking Initiative prior to Signing of the Grant Agreement. The Bank recognizes the right to information, and has information disclosure policies which generally contain the following elements: principles of disclosure; exceptions to disclosure; routine disclosure; and request driven disclosure. Disclosure of documents (including a summary of the project, and a summary of Environmental Assessment) should be in the local language, at a public place accessible to project-affected groups, local non-governmental organizations and other interested persons. In-country disclosure of information is the responsibility of the borrower,

in this case of the project proponent through the steering committee or the individual institutions that will be implementing a project, in this case the DNGRH, INIR, MINEDH and AIAS. Disclosure in the *InfoShop* is the responsibility of the World Bank.

Documents that need to be disclosed include:

- Integrated Safeguards Data Sheet
- All Safeguard mitigation plans:
 - Environmental Assessment/ Environmental and Social Management Plan
 - Pest Management Plan
 - Resettlement Action Plan, Policy Framework or Process Framework

All documents should be made available to stakeholders well in advance of consultations and all public consultations should be completed and draft or final documents should be disclosed prior to the project appraisal. In addition, all final documents, including the results of the consultations should be disclosed for the record.

For the present ESMF document, information disclosure was initiated with the advertisement of the public participation meetings held in the three provinces targeted for the implementation of the ERRP. The meetings provided an opportunity for stakeholders to provide comments and useful inputs to be taken into consideration when planning and implementing the proposed project. As the ESMF has now been drafted, it is proposed that the disclosure process be through continued interaction with stakeholders using contacts gathered during public meetings. E-mail contacts shall be used to inform that the ESMF document has now been drafted and it is available on the web and stakeholders shall be invited to provide further comments as needed. A public advert shall also be sent to most widely distributed and read newspaper in the country, to inform stakeholders of the availability of the ESMF document for review and comments. The selected **inter-institutional coordination body**, led by the National Directorate of Management of Water Resources (DNGRH), shall ensure the availability of the full ESMF in Portuguese in Maputo, as well as in all their provincial and district offices.

7. MOZAMBIQUE ENVIRONMENTAL AND SOCIAL MANAGEMENT LEGAL FRAMEWORK

Mozambique's Constitution recognizes that ecological balance, conservation and preservation of the environment are key for the quality of life of its citizens. A number of pieces of legislation and policy provide legal context and background for environmental and social management system in Mozambique. Because of the Rio Conference on Sustainable Development in 1992, Mozambique like other countries has undergone major legal and institutional reforms in the environmental sector. The country has adhered to several international conventions and protocols for the protection of the environment, and as a result continues to improve the legislation on many sustainable development issues in the country to ensure that Mozambicans enjoy quality living conditions.

The Ministry of Land, Environment and Rural Development is the Government institution responsible for ensuring the preservation and responsible use of natural resources including land, the coordination of environmental activities and environmental licensing. Provincial Directorates for Coordination of Environmental Action (*Direcções Provinciais de Terra, Ambiente e Desenvolvimento Rural* - DPTADER) and in some cases District Directorates for Coordination of Environmental Action (*Direcções Distritais de Infraestruturas*) are the local representatives of MITADER.

This section provides a summary of environmental and social related policies, laws and regulations in Mozambique, particularly those of relevance to the Project.

7.1 The Constitution

Chapter 5 Article 90 of the 2004 Constitution of the Republic of Mozambique, provides that all citizens the right to live in a safe environment as well as the obligation to preserve it. The key objective of the clause related to the environment in the Constitution is to provide a legal framework for a proper use and management of the environment and its components, for the achievement of sustainable development in the country. This achievement involves proper management of the environment for the creation of conditions that guarantee health and well-being, socio-economic and cultural development of communities and the conservation of natural resources.

The state is also required by the Constitution to guarantee the sustainable use of natural resources and ecological stability for future generations and to promote land use planning to ensure that activities take place in the correct locations and that such activities contribute to balanced socio-economic development. The 2004 Constitution also creates an obligation on communities to protect, and makes provisions for the conservation and preservation of the environment, with a view of guaranteeing the right to the environment and quality of life within the framework of sustainable development as stipulated under Article 117.

7.2 Environmental Legislation

The 1995 National Environment Policy in Mozambique, Resolution n° 5/95, establishes the basis of all environmental legislation in the country. According to Article 2.1, the main objective of this policy is to ensure sustainable development in order to maintain an acceptable balance between socioeconomic development and environmental protection. To achieve the above objective, the policy must ensure, among other requirements, the management of natural resources in the country and the environment in general - in order to preserve their functional capacity and production for present and future generations.

The 1997 Environmental Law (Law n° 20/97) sets the environmental foundations for the policy and institutional framework for environmental management in Mozambique. The Law

establishes the scope, institutions and appropriate management tools to deal with environmental management issues.

The Ministry of Land, Environment and Rural Development (MITADER) is the main government entity with the responsibility for coordination of government actions related to environment. With the recent changes in the designation of the Ministry, it is not yet clear how the new structure will comprise be based on an addition of areas to its mandate. It is possible however, to ascertain that MITADER has the following competencies:

- Inter-sectorial coordination of environmental issues
- Research planning and environmental management
- Territorial planning and land management
- Environmental impact assessments
- Environmental education and dissemination of information; and
- Inspection and control *inter alia*.

In terms of principles to be followed for sustainable development, the Environmental Law of 1997 establishes the following:

- the use and rational management of natural resources;
- recognition and value of community knowledge and traditions;
- environmental management based on preventive systems;
- integrative management;
- citizen participation; and
- Accountability.

At national level, MITADER has the responsibility to guide the implementation of environmental policies and to coordinate the sustainable planning and use of natural resources of the country. At the provincial level, MITADER is represented by the Provincial Directorates for the Coordination of Environmental Affairs (DPTADERS). At district level MITADER's representation is through the District Directorate for Infrastructure and the Environment. This department is responsible for handling issues related to land use planning, as well as any issue related to environmental protection.

The Environmental Impact Assessment (EIA) is recognized to be a vital procedure for an effective development planning and is therefore a determinant watershed for environmental protection in the country. It includes provisions for EIA, Environmental Management Plans (EMP), and environmental auditing.

Mozambique's EIA is regulated by the Decree 54/2015 of 31 December, which revokes Decree 76/98 (of 29 of December), and the revised in 2004 and updated by Decree 45/2004 (of 29 of September). The main changes involve the establishment of three EIA categories, namely:

Category A+ - For projects with likely significant impacts decision making is reserved for the central level, in these instances a full EIA is required to be undertaken and supervised by Independent Specialists Reviewers with verifiable experience;

Category A - For projects with likely significant impacts decision making is reserved for the central level, in these instances a full EIA is required;

Category B - For projects with impacts considered less significant or which require less complex mitigation measures decisions are made at provincial and local levels, for instance, when a Simplified Environmental Study (EAS) is required;

Category C - Is for small projects that may not require an EIA, but must follow the regulations for environmental impact. For these projects, decisions are also made at provincial level. Projects under this category are subject to Good Practices of Environmental Management Procedures, which should be elaborated by the project proponent and submitted to MITADER or the entity responsible for the approval process.

Article 5 of Decree 54/2015 makes provisions for exemption in undertaking the EIA or simplified EIA for some activities, particularly those related to immediate actions in response to disasters or natural calamities, emergency situations resultant from development activities, and activities related to national defense and security. In the case of disasters and emergency situations, Article (2) stipulates that MITADER should make instructions for such exemptions, and make provisions for audits posteriorly.

One of the important changes made with the recently approved Decree 54/2015 is related to fees to be paid by project proponents for the decision on environmental viability as per Article 23. Article 27 set the fee at 0.30% of the investment amount to be paid for Category A+ projects; 0.20% for Category A and B projects; 0.02% for Category C projects with an investment above 5,000,000.00 meticaís and 1,000.00 meticaís for projects with an investment value of up to 5,000,000,00 meticaís.

Environmental Audits and Environmental Inspection are regulated by Decrees No. 32/2003 (of August 20) and No. 11/2006 (of July 15) respectively. The Regulation on Environmental Audit Process indicates that public or private activities are subject to public environmental audits conducted by MITADER as well as private entities. According to this regulation, audited entities are required to provide to the auditor's full access to the sites to be audited, as well as all information that may be required during the auditing process. Meanwhile, the Regulation on Environmental Inspections (Decree No. 11/2006 of July 15) regulates the mechanisms for inspection of public and private activities, which directly or indirectly are likely to cause negative environmental impacts. This law aims to regulate the activity of supervision, control and surveillance of compliance with environmental protection measures as recommended for development projects.

The Mozambican Environmental Law also establishes that an EIA must be undertaken for all development projects, policies, plans and programs that may have a significant impact on the environment, and recognizes the need to guarantee the participation of local communities and to utilize their knowledge and human resources in the protection of the environment.

Given the nature of the foreseen works to be contemplated under the ERRP, it is expected that most potential impacts can be effectively mitigated with Environmental Management Plan (EMP), guided by the existing EIA Regulations in Mozambique as well as other Directives which aim at minimizing the impact of development projects upon the natural environment and human health.

7.3 Disaster Management

The Disaster Management Law, 15/2014 of June 20, 2014 establishes the legal framework for disaster management and makes provisions for prevention, mitigation, recovery and reconstruction. The main objective of disaster management, as defined by the above law, is to prevent or reduce the adverse impacts of natural disasters on human lives. The law defines the following: solidarity, justice, efficiency and participation and cooperation as the essential principles of disaster management. Decree 7/2016 of 21 March, regulates the above Law and establishes the legal rules for disaster management in the country. Until recently, the Master Plan Natural Disaster Prevention and Mitigation (2006-2016) has been used as an operational document as it has specific objectives, expected results and actions or activities to be implemented to achieve the desired result.

7.4 The National Adaptation Programme of Action (NAPA)

The National Adaptation Programme of Action (NAPA) sets out the immediate and urgent needs of the country that have been identified during a participative evaluation process, for the purposes of strengthening national capacity to cope with the adverse effects of climate change.

The NAPA has 7 objectives: strengthening early warning systems; strengthening capacities of subsistence farmers in dealing with the adverse impacts of climate change; improvement knowledge and the management of rivers; promote actions to limit erosion and ensure sustainable fishing; promote actions that will contribute to the reduction of emission of greenhouse gases; promote public education on climate change and improve coordination between various actors working on issues related to the assessment of climate change vulnerabilities and risk reduction.

The NAPA is a relevant document for the ERRP, given its specific focus on providing guidance on how to address and adapt to the effects of climate change in Mozambique. Of particular relevance is that the document outlines four key actions that should be employed to reduce the adverse impacts of natural disasters through adaptation, highlighting the use of locally available resources and cost efficient, environmentally friendly, and sustainable approaches.

7.5 The Land Law

In Mozambique land issues are governed by the Land law 19/97 of October 1st, 1997 and its Decree 66/98 of December 8th, 1998. The country is said to have one of the most progressive land laws in Africa mainly because it safeguards the rights of its population over land and natural resources whilst promoting investments and sustainable use of resources. The Law clearly provides that “land is property of the state and cannot be sold or otherwise alienated, mortgaged or seized” (Art. 3 of the Land Law). Land is attributed in the form of a 50-year renewable lease known as a Land Title or DUAT (*Direito de Uso e Aproveitamento de Terra*) in Portuguese. The prerequisites for the acquisition of the DUAT differ for national and foreign subjects. According to the Land Law, the acquisition process requires the judgement of local administrative authorities, and a consultation with the corresponding communities to ensure that the area in question is free and unoccupied (Art. 13, 19/97).

7.6 Legislation on Water and Water Rights

The Mozambican Constitution of 2004 provides that all water resources are owned by the state. In terms of the actual management of water and water rights, the 1991 Water Law 16/91 of August 3rd 1991 is the key legal and regulatory framework. Similar to land, the Water Law stipulates that water is a public domain, that it is inalienable and imprescriptible, and that rights to its use shall be conferred by the State (Art. 1 (3)). In general terms, the law makes provisions for the management of water and the acquisition of water rights. The objective of the Law is to provide a general legal framework governing the activities of protection and conservation, inventorying, use and appropriation, control and monitoring of water resources. Directives are provided for water management policy, which include the roles and responsibilities of the State in the promotion, creation of guidelines and regulation of the use of water in different sectors including agriculture.

Art. 21 of the Law makes a distinction between water for common use and water for private use. Common use includes household consumption as well as smallholder agriculture on up to 1ha of land (but excludes irrigation or usage of water with mechanical equipment). The use of water under this category is not subject to a license or concession. It is important to highlight that this group is prioritized. In terms of the second category, water for private use, the Water Act makes provisions which include compulsory licensing or concessions for use and appropriation which is accessible to any individual or collective person, public or private, national or foreign, duly authorized to act in the national territory in terms of the law, and provided that they do not place the ecological equilibrium or the environment at risk.

The Water Licenses and Concessions Regulation (*Regulamento de Licenças e Concessões de Águas*) for the private use of this resource, is set out in Decree 43/2007 of October 30, and is applicable only to waters that lie outside the action of the tides and/or whose water bodies (lakes and lagoons) communicate with the sea only during spring tides. For water concessions,

a set of documentation must be submitted to the Regional Water Administration (ARA), including a description of the proposed use, economic justification and technical description. In terms of provisions on pollution management, the legal and regulatory framework concerning the prevention of pollution and the safe use of chemicals is broadly provided for under the Environmental Law 20/97 however, sector specific regulatory frameworks are also available in this regard. Article 52 of the Water Law for instance, stipulates that water in the public domain should be protected against contamination, and that the accumulation of toxic or dangerous compounds that may contaminate water should be prevented. Article 54 of the same Law stipulates that any activity with the potential of contaminating or degrading public waters, particularly the discharge of effluents, is subject to a special permit to be issued by ARA, and the payment of a fee.

For water management, Mozambique has a specific regulation, Decree 13/2006 of 15 June, which lays down rules concerning the production, deposit on soil and subsoil, throwing to the water or to the atmosphere, of any toxic and polluting substances, as well as the practice of polluting activities which could accelerate impairment of the environment, to prevent or minimize their negative impacts on the health and environment. These articles although sector specific, are in conformity with the provisions around pollution and contamination of the environment stipulated in the Environmental Law.

7.7 Electric Energy Law

The Electric Energy Law (Law nr. 21/97) was approved by the Council of Ministers in October 1st, 1997. According to the law, any electric energy concession/permit must among others: (a) guarantee the maintenance of all components of the energy system; (b) return water used for electric energy production in good quality conditions (temperature, salinity, turbidity); (c) repair any damage to roads and other infrastructures that were done during construction, repair and improvement of electric energy facilities; and (d) observe water, fisheries and environmental laws and regulations in Mozambique.

Article 31 refers to the safety and protection of patrimony and environment and indicates that no electric energy station should endanger people and infrastructures nor block free circulation of vehicles and people. It also indicates that electric energy stations must be located in appropriate places taking into account environmental conditions and the ecological systems crossed by the energy system. Historic and cultural patrimony as well as areas of scientific, ecological or architectural value must be respected and appropriate measures should be taken to avoid their damage.

7.8 Basic Education Regulation

The Basic Education Regulation, Diploma 46 /2008 of May 14, 2008, is relevant to the ERRP project as it makes provisions for the functioning and creation of basic public education. Article 6 of Section II provides that all public and private schools should function in adequate buildings and in conditions. Article 6 further stipulates that schools should have access to potable water,

toilets or latrines, and should provide access to people with disabilities. School buildings should be constructed in adequate locations, and using the criteria and design approved by the Ministry of Education and Human Development (MINEDH).

For the purposes of the ERRP, sub-component A-4 on the *Rehabilitation and Reconstruction of Resilient Schools*, the experience and construction model recommended by the Safer Schools Project based on the UN-Habitat Mixed Material School Design (using conventional and non-conventional materials that are locally available) and on the catalogues of technical measures to ensure the safety of pupils and assets will be used. The rehabilitated or reconstructed school infrastructure should be designed using a multi-hazard approach with designs and quality able to withstand flooding, wind and earthquake risks. This model has been endorsed by the Ministry of Education and Human Development.

7.9 Labour Law

The Mozambican Labour Law 23/2007 of August 1st, makes provisions for individual and collective persons in relation to remunerated work or labour in the country. For the purposes of the present ESMF, Chapters I (General Provisions), III (Individual Work Relations) and IV (Hygiene, Safety and Health of Workers) of the Labour Law highlighted, however all provisions stipulated under the law should be observed.

Article 11 of the law makes special provisions for women workers, with particular protection to women worker rights in terms or pregnancy, where provisions are made in terms of protecting their remuneration (employers should not reduce these), that they should not be laid off, that night shifts or other related changes are discouraged during the time of pregnancy. In addition, Article 11 (2-6) makes provisions for women not to be employed in activities that may have a negative impact on their reproductive health, that a women's dignity should be safeguarded, that discrimination on the basis of sex is prohibited and is punished by law.

Article 23 of the law makes provisions around child labour, and stipulates that the employer should adopt measures that provide the minors with adequate working conditions per age, considering health, safety, education and training and these should not have adverse impact on the physical, mental and moral development of the child. Article 23 (2) and (3) further stipulates that the employer shall not occupy a minor under the age of 18 in unhealthy and dangerous activities or those that require great physical efforts; and that acceptable normal period of work of the minor between the age of 15 and 18 should not exceed 38 hours and a maximum of 7 hours per day. It is worth mentioning that in Mozambique child labour is a major issue and it is reported that close to 22% minors between the ages of 5-14 are engaged in child labour (MICS 2008). Legally, in terms of the Labour Law, an employee can only admit minors who are at least 15 years old, provided they have authorization by a legal representative (parent or legal guardian). In terms of rights and responsibilities, Article 23 makes provisions, some of which have been mentioned above. In addition to this, Mozambique is a signatory of the International Labour Organization (ILO) Conventions 138, related to the Minimum Age and 182 related to the Eradication of the Worst Forms of Child Labour.

In terms of health, safety and hygiene in the workplace, the legal framework in Mozambique goes beyond the Labour Law and includes the Constitution of 2004, the ILO Conventions related to the matter and other regulations such as the Judicial Regime on Work Related Accidents and Work Related Illnesses. The Constitution makes provisions for the right to retribution and safety in the workplace as well as the right to healthcare. Article 85 (2) stipulates that all workers shall have a right to protection, health and safety at work, and Article 89 stipulates that all citizens shall have the right to health and medical care and shall have the duty of promoting and protecting public health.

Mozambique has been a member of the International Labour Organization (ILO) since 1976 and has ratified of various (18) international labour conventions of which two will be highlighted here. The ILO Convention 17 (CO17) on Workmen's Compensation (Accidents) of 1925, makes provisions to ensure that workers (or their dependents) who suffer personal injury due to an industrial accident shall be compensated. Convention 18 (CO18) on the other hand makes provisions for worker's compensation for occupational diseases and refers to national legislation for the conditions under which such compensation shall be paid. More recent guidelines and recommendations on health, hygiene and safety in the workplace have been provided by the ILO, both in generic terms as well as related to specific areas of work such as construction and agriculture.

The Labour Law has more specific provisions in relation to health, hygiene and safety in the workplace. The key principles under Article 216 include:

- All workers have the right to work in hygienic and safe conditions, and the employer is obliged to ensure that adequate working conditions are created;
- The employer shall provide their workers with optimal physical, environmental and moral working conditions, inform them of any associated risks related to their work where applicable and provide them with adequate measures to abide by the health and safety rules and regulations in the work place.
- Workers shall ensure their own health and safety, as well as of others who may be affected by their work;
- The employer should employ adequate precautionary measures to ensure that all work location entry and exit accesses are safe and do not pose a risk to a risk to workers;
- The employer shall make provisions for appropriate protection equipment and work clothing for workers when required, to prevent accidents and adverse health impacts;
- The employer and workers shall abide to the rules and regulations related to hygiene and safety in the workplace;
- Employers may make provisions for the prevention and fight against HIV/AIDS and other illnesses in the workplace, and shall abide to the principle of confidentiality and consent for HIV/ AIDS tests.

Article 217 and 218 make provisions for the establishment of workplace safety commissions (which should include employers and workers) where companies pose exceptional risks in

terms of work related accidents or health issues, and stipulate the regulations for health and hygiene. The workplace safety commissions have the responsibility of monitoring and ensuring compliance to health and safety measures, investigating work related accidents in identifying and organizing prevention and assurance mechanisms for hygiene and safety in the workplace. In terms of regulations, the norms related to hygiene and safety are governed by specific legislation as well as by codes of conduct established by companies or workers' unions of a specific work area.

Articles 219 to 221 of the law make provisions for workers' health in terms of the availability of medical assistance in the workplace, directly or through third party contracting; through the installation of a private health unit for workers, provided the number of workers accessing health services does not exceed the capacity of such a health unit; and in terms of medical examinations which should be done on workers regularly.

Articles 222 to 236 of the same law makes specific provisions in relation to work related accidents and work related illnesses. Work related accidents are defined as those that take place during working hours, and which result in body injuries, functional disturbances or illness, reduction in the capacity to work and death. In the event of accidents caused by the worker intentionally, because of negligence, or that are a result of *forca major*, the employer is not liable and therefore not obliged to provide compensation or pay for damage. Work related illnesses are defined as those that arise as a result of a given professional activity or closely related to a profession, given its toxic or biological nature. Article 224 (2) places particular attention to illnesses that result from work with the following substances:

- Lead poisoning
- Mercury poisoning
- Poisoning as a result of pesticides, herbicides, dyes and harmful solvents
- Intoxication or poisoning resulting from industrial dust, gases, and vapors
- Exposure to asbestos dusts and fibers in air or in products that contain asbestos
- Intoxication as a result of x-rays or radioactive substances
- Carbuncular infections
- Work related dermatoses.

The employer is obliged to make provisions of effective preventative measures to avoid accidents and illnesses in the workplace, and these should be done in strict coordination with the entity responsible for safety and hygiene in the workplace where these roles are split.

In addition to the above, Decree 62/2013 of December 4th, on Judicial Regime on Work Related Accidents and Work Related Illnesses, revokes Legislative Diploma 1706 of October 19, 1957 and all other contradictory legislation. This Decree should be applied in conjunction with the Labour Law, and where there are contradictions, the former should be applied.

Despite the existent legislation related to labour in the country, Mozambique faces major challenges, particularly as 86% of the country's labour force works in the informal market, 27% of women are unemployed, the country has a very young population of which

approximately 43% are under the age of 15 and 39% are within the ages of 15-24 (ILO). In order for this project to be successful, this data has to be taken into account. All provisions of the Constitution, the Labour Law, the Judicial Regime on Work Related Accidents and Work Related Illnesses and the ILO Conventions on Health and Safety in the workplace shall be abided to during the implementation of the ERRP, and the present ESMF identifies specific recommendations in the section related to mitigation measures and in the ESMP.

7.10 Contracting for Public Civil Works

Mozambique has recently approved legislation related to the Contracting of Contractors for Public Civil Works, Goods Supply and Provision of Services, Decree 5/2016 of March 8th. This legislation has provisions ranging from procedures for contracting of contractors for public civil works, goods and service provider to the management of such contracts, to claims and appeals. Of relevance is Article 160 on Safety and Discipline on Site. Article 160 stipulates that the contracting party should demand a Health and Safety Plan from the contractor; that the contractor is obliged to guarantee safety in the construction site and places of work and should abide by the legislation on health, hygiene and safety in the workplace, as described under section 7.9 of this document; the contractor should maintain a reliable signpost signaling system in the construction site and especially where works are being carried out on public roads; and the contractor should ensure discipline and order in the site location and areas of work.

Article 163 of Decree 5/2016 provides that the contractor is obliged to comply with the requirements defined in the contract signed as well as with environmental legislation with the contracting party with regards to the protection of the environment.

The ERRP shall comply with the provisions of the present Decree in terms of the management of the contractors that are to implement the construction activities as described under Component A and its sub-components of the project.

7.11 Resettlement Process

Regulations on the Resettlement Process resulting from Economic Activities (Decree 31/2012 of 8 August) regulation establishes the basic rules and principles on the resettlement process for the purpose of providing the opportunity to improve the quality of life of affected households. Article 4 lists the principles guiding the resettlement process resulting from the public and private activities. These include principles on social cohesion; social equality; direct benefit; social equity; non-change of income level; public participation; environmental accountability; and social responsibility.

This Decree makes provisions for the resettlement process, including planning, provides the rights of the affected populations and makes provisions for fines in the event of non-compliance.

Ministerial Diploma 156/2014, of 29 September operationalizes Decree no. 31/2012 of 8 August and provides guidance on the elaboration and implementation process of resettlement plans. This Diploma also provides recommendations for the phasing of the resettlement process which are i) collection and analysis of physical and socio-economic information; ii) preparation of the resettlement plan; and iii) elaboration of the implementation action plan of the resettlement project.

During the data collection and analysis phase, the following information should be collected:

- Identification and delimitation of the area of intervention, taking into account areas in the proximity of the project whenever possible;
- Number of families that will be affected and their socio-economic profile, considering their current situation, their characteristics and lifestyles, their social and structural organization as well as position within the community that they are part of, the most vulnerable groups; and the
- Biophysical characteristics of the area.

The Resettlement Policy Framework (RPF) elaborated in parallel to the present ESMF provides more details on the legal and guiding frameworks of the resettlement process in Mozambique and taking into account the World Bank Involuntary Resettlement Policy OP 4.12, and provides specific guidance and steps to be followed to either avoid resettlement or mitigate any potential adverse impacts where this is unavoidable.

7.12 Public Consultations Process

The Ministerial Diploma no. 130/2006 and the Decree 54/2015 make provisions for the Public Consultation Process. The former defines the basic principles related to public participation, methodologies and procedures that should be used. It considers public participation an interactive process that begins in the design phase and continues throughout the lifetime of the project. Decree 54/2015 provides for the public consultation process in the context of the Environmental Impact Assessment process. Both documents establish the need for conducting public consultations with affected and interested persons that may be affected by an activity or project directly or indirectly.

The objective of the public participation process is to identify interested and affected parts, disclose information related to the project to them, manage dialogue with the project proponents, and take comments and suggestions from the public in general. The basic principles of public consultation include the following:

- Availability and access of adequate information
- Wide participation of citizens
- Representation
- Functionality
- Negotiation and

- Accountability

For Category A+ and A activities public consultations are compulsory, whilst for Category B, these are optional unless the activities will result in *a)* temporary or permanent displacement of people or communities, and/ or *b)* if the activities will result in the displacement of assets or restrictions in the use of natural resources.

Within the context of project EIA, a Ministerial Diploma n° 130/2006 was introduced to stress the need for and importance of public participation process, which seeks to integrate non-experts' views into EIA decision-making process, by allowing individuals and civil society to voice their concerns with regards to environmental sustainability of proposed projects. Public participation has been critical in the preparation of this ESMF, and will be critical throughout the cycle of the ERRP project.

8. GAPS IN MOZAMBIKAN LEGISLATION AND IN THE WORLD BANK SAFEGUARD POLICIES

The major gap in both related Mozambican legislation and in the World Bank Safe Guard Policies is related to the lack of clear procedures and norms for handling health, safety and security for both the local population of a particular project area and/ or the project workers. In addition to the provisions made under the Mozambican legislation Law in terms of procedures for health, safety and security, as described in the previous chapter of the present document, the World Bank Group Environmental Health and Safety Guidelines are recommended for the ERRP and related projects. This section provides a description of the specific standard on health and safety to guide the project proponent throughout all phases of implementation of the project, and provides some guidance on what mitigation measures should be taken.

Performance Standard 4 recognizes that project activities, equipment, and infrastructure often bring benefits such as employment and access to services however, they also have the potential of increasing exposure to risks and impacts arising from equipment accidents, structural failures, and releases of hazardous materials. Local inhabitants of the project areas may also be affected by impacts on their natural resources, exposure to diseases, and the use of security personnel.

The objectives of the Performance Standard for are to:

- To avoid or minimize risks to and impacts on the health and safety of the local community during the project life cycle from both routine and non-routine circumstances; and to
- Ensure that the safeguarding of personnel and property is carried out in a legitimate manner that avoids or minimizes risks to the community's safety and security.

The Performance Standard 4 requires that risks and impacts to the health and safety of the affected community during the design, construction, operation, and decommissioning of the project are identified and that preventive measures to address them are put in place. Where the project poses risk to or adverse impacts on the health and safety of affected communities, an Action Plan requires to be disclosed by the project proponent.

The following should be considered when assessing the potential risks related to health, safety and security:

- Infrastructure and Equipment Safety
- Hazardous Materials Safety
- Environmental and Natural Resource Issues (such as floods/ landslides etc.)
- Community Exposure to Disease (such as water-borne illnesses etc.)
- Emergency Preparedness and Response.

The project proponent should assess the potential risks and impacts from project activities and inform affected local population of significant potential hazards in timely. It is also the responsibility of the project proponent to support and work with the project affected population and the local government structures to respond to any arising emergency.

For the purposes of implementation of this ESMF, potential health, safety and security impacts associated with the project have been identified, and mitigation measures have been recommended in the section that follows.

9. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATIONS ACTIONS

It is expected that potential negative environmental and social impacts associated with the proposed ERRP will be of localized and short-term nature, and can be significantly minimized through adequate planning and a thorough implementation of the Environmental Management Plans by the Contractors responsible for conducting the construction/rehabilitation works and actions related to emergency recovery as well as relevant sectors which are envisaged in Components A and D of the Project.

This sections highlight the potential impacts per sub-component and activity envisaged, and provide recommendations for mitigation actions and measures.

9.1 Rehabilitation of Dykes and Damaged Weirs

This sub-component focuses on the reconstruction of the Nante and Nicoadala Dykes, and the Eribacela Weir, all located in the Zambezia province.

9.1.1 Potential Adverse Environmental Impacts

- Soil erosion can be expected to result from earth-moving activities during rehabilitation works and will expose the soil to erosion. Soil erosion is susceptible where vegetative cover is reduced.
- The use of heavy machinery and equipment may also result in soil compaction, changing surface and ground water flows and adversely affecting future use of soils for agriculture for instance.
- Equally excavation, extraction of construction materials and other construction-related activities can result in solid waste pollution and soil contamination.
- Contamination of ground and surface water as well as soils as a result of chemicals (oils, fuels and lubricants from machinery and vehicles working on site, remains of paints, etc.) particularly on sites located near waterways.
- Setting-up of semi-permanent work sites may cause negative impacts due to accumulation of solid waste, and disposal of human waste.
- Poorly installed channels in wet areas may concentrate water in specific areas and subsequently drain the area and contribute to drying up wetlands.
- Reconstruction of dykes and weirs may modify the habitat of species including threatened and endangered plants or another species.
- Hydrologic changes, resulting from the rehabilitation of dykes and weirs can lead to significant increase in mosquito breeding sites.

9.1.2 Potential Adverse Social Impacts

- Social conflicts resulting from land uptake as may be required for the reconstruction of dykes and weirs, and these may have a worse impact on the most vulnerable, particularly households headed by women and/ or children.
- The expected rise in human population attracted by the dykes and their associated wastes are likely to increase exposure to disease transmitted from contaminated standing water in the previously flooded areas during the wet season.
- Public nuisance and health impacts resulting from inadequate disposal of solid wastes including demolition materials. These can be reduced through introduction of fish for vector control and improved sanitation and health care services.
- Noise pollution given the reconstruction works, as a result of operating machinery and equipment.
- Increase in the risk of water borne diseases such as cholera or malaria in the project areas.
- Increase in HIV/AIDS rates as a result of workers coming from other areas of the country.
- Possibility of work-related accidents where health, safety and hygiene measures are not put in place, and monitored closely.

- In terms of local employment, the non-use of local resident manpower during the rehabilitation and construction of the infrastructures could cause some frustrations at the local level (and could lead to social conflicts).
- Acquisition of land may be required for rehabilitation or reconstruction works, which may lead to involuntary resettlement of local communities.

9.1.3 Positive Impacts

The purpose of dykes and weirs are to prevent or control water from entering habitable areas, and they are very common along river banks in areas prone to flooding. Their functions are therefore to manage the levels and flow/ discharge of water, to enhance the environment and to stabilize water channels.

- In the project areas, dykes and weirs play an important role given the exposure to floods in these areas. Dykes and weirs are also key in ensuring flood control and the protection of human lives, livelihoods and infrastructures invested in the surrounding areas.
- It is expected that the reconstruction of the dykes and weirs will bring many benefits to the communities living or returning to the targeted areas of the project, particularly in terms of mitigating the adverse impacts of future floods, in making more habitable land available for settlement and cultivation of crops, and in reducing associated socioeconomic disruptions caused by the need to migrate or resettle during the rainy season.
- Another positive impact is the reduced exposure to and incidence of water borne diseases that severely affect peoples' health during flooding.
- These rehabilitations will also have an impact on the continued functioning of the Mziva and Munda-Munda irrigation systems, the agriculture production in these areas, and subsequently provide improved incomes and livelihoods for the population and economy of the country in general.

9.2 Rehabilitation of Rural Infrastructure in Maganja da Costa

Under this sub-component, the key activities will include the reconstruction of irrigation systems, reconstruction of rural roads and bridges and rehabilitation of the electricity supply line in the Maganja da Costa district of Zambezia.

9.2.1 Potential Adverse Environmental Impacts

- Air pollution can be caused by dust/ toxic chemicals in the air during the rehabilitation and reconstruction works.
- Reconstruction of rural access roads may disrupt the integrity of plant and animal populations and alter sensitive ecosystems (loss in vegetation and natural habitats).

- Soil erosion on short-term basis can be expected to result from earth-moving activities during rehabilitation that will expose the soil to erosion.
- The use of heavy machinery and equipment may also result in soil compaction, changing surface and ground water flows and adversely affecting future use for agriculture.
- Equally excavation, extraction of construction materials and other construction-related activities can result in erosion and soil contamination as well as accumulation of solid waste which will need to be well managed. Over the longer term, if erosion persists, it may result in reduced the depth of top soils depth, which may affect soil water and nutrients.
- Contamination of ground and surface water as a result of chemicals (oils, fuels and lubricants from machinery and vehicles working on site, remains of paints, etc.) particularly on sites located near waterways.
- The use of synthetic pesticides may lead to increase in production of horticulture and other crops in the areas covered by the irrigation schemes, however inadequate use of such inputs may have adverse impacts on water resources, on the avifauna of surrounding areas as well as on human health.
- Setting-up of semi-permanent work sites may cause negative impacts due to accumulation of solid waste, and disposal of human waste, which will need to be well managed according to sound waste management principles and procedures as advocated in the World Bank Group Guidelines on Environmental Health and Safety Guidelines and Policies.

9.2.2 Potential Adverse Social Impacts

- Setting-up of semi-permanent work sites may cause negative impacts due to accumulation of solid waste, and disposal of human waste. These may harm the health of the local communities in the target areas of the project or proximities.
- Required involuntary resettlement and land conflict resulting from land uptake as may be required for the reconstruction of irrigations systems, roads, bridges and electricity supply lines.
- Occupation of private land by contractors during works (parking of vehicles, storage of equipment, setting-up of temporary camp-sites etc.) without prior authorization/ consent provided by occupants.
- An influx of construction workers from other regions/countries and the improved road may introduce new diseases to the local population or increase the incidence of the local infection.
- Public nuisance and health impacts resulting from inadequate disposal of solid wastes including demolition materials.
- Displacement of inhabitants, culture shock, noise and air pollution, and construction works hazards, vibration, and damage to sacred and historic.

- In terms of local employment, the non-use of local resident manpower during the rehabilitation and construction of the infrastructures could cause some frustrations at the local level (and could lead to social conflicts).
- Acquisition of land may be required for rehabilitation or reconstruction works, which may lead to involuntary resettlement of local communities.

9.2.3 Positive Impacts

- Reconstruction of electricity supply lines will not only benefit the irrigation systems but also the population living in the surrounding areas of the project. It will entail that more people in Mozambique will have access to electricity, better healthcare provided especially at night, and better teaching and learning conditions, where these are also taking place in the evenings as a result of electrification.
- Reconstruction of rural roads and bridges will have a great impact particularly in linking rural produces with markets, especially in the commercialization of crops produced using the reconstructed irrigation schemes. This in turn will have a spillover effect on the lives of the rural producers, will increase their incomes, and ultimately create incentives for increased production and productivity in the agriculture sector.
- Road improvements will also increase communication among rural and urban populations and potentially stimulate trade.
- Uncontrolled floods can cause tremendous damage and flood control is therefore often an added social and environmental benefit.
- Reconstruction and rehabilitation of the irrigation systems will entail improved access to water for irrigation, reduces dependence on rain-fed production in surrounding areas, increased levels of production, outputs and incomes for all producers, particularly the most poor and vulnerable.
- Potential for food and nutrition security for the people living in the surrounding areas of the irrigation schemes given assumed food production and diet diversification.

9.3 Rehabilitation of Mocuba Water Supply System

This component will focus on the rehabilitation of the Mocuba drinking water supply system, with minimum investments and temporary repairs, given whilst a detailed study to determine a longer-term and more resilient and sustainable reconstruction or replacement of the system is being conducted. This water supply system is located in the district of Mocuba in Zambezia province.

9.3.1 Potential Adverse Environmental Impacts

- Air pollution can be caused as a result of dust/ toxic chemicals in the air during the rehabilitation and reconstruction works.

- Contamination of ground and surface water as a result of chemicals (oils, fuels and lubricants from machinery and vehicles working on site, remains of paints, etc.) particularly on sites located near waterways.
- During all types of construction and rehabilitation works, residual waters, chemicals and oils are discharged. These have the potential of adversely affecting underground water and soils in the areas where the project is implemented.
- Soil erosion can be expected to result from earth-moving activities during rehabilitation works and will expose the soil to erosion. Soil erosion is susceptible where vegetative cover is reduced
- The use of heavy machinery and equipment may also result in soil compaction, changing surface and ground water flows and adversely affecting future use for agriculture.
- Equally excavation, extraction of construction materials and other construction-related activities can result in erosion and soil contamination. Over the longer term, if erosion persists, it may result in reduced the depth of top soils depth, which may affect soil water and nutrients.
- Loss in vegetation and damage to natural habitats.

9.3.2 Potential Adverse Social Impacts

- Water shortages in some areas during the rehabilitation or emergency repairs works.
- Inadequate sanitation in construction areas which can be mitigated/ avoided with the provision of adequate washing and toilet facilities close to the works.
- Water borne illnesses resultant from still waters/ water treatment.
- Incidents and accidents are bound to occur in the workplace.
- Noise and vibrations are common during construction and rehabilitation works.
- Potential for social conflicts between workers (from other areas) at site and members of local community.
- In terms of local employment, the non-use of local resident manpower during the rehabilitation and construction of the infrastructures could cause some frustrations at the local level (and could lead to social conflicts).
- Acquisition of land may be required for rehabilitation or reconstruction works, which may lead to involuntary resettlement of local communities.
- Temporary disturbance of commercial activities a vital source of livelihoods

9.3.3 Positive Impacts

- More people with access to safer water in the Mocuba district, particularly girls and women can spend time undertaking other activities and going to school instead of walking long distances in search of water.

- Reduction in water-borne illnesses and water contamination due to safe supply of water in the target area.
- Opportunities for temporary jobs and improvements of skills and abilities of local workers.
- The project will stimulate the local economy.

9.4 Rehabilitation and Reconstruction of Resilient Schools

This component will focus on rehabilitating and constructing resilient schools, using two methods - conventional classrooms; and constructing mixed-material classrooms using locally available materials.

9.4.1 Potential Adverse Environmental Impacts

- Disruption in school classes, resulting in noise and air pollution such as dust/ toxic chemicals in the air.
- During all types of construction and rehabilitation works, residual waters, chemicals and oils are discharged. These have the potential of adversely affecting underground water and soils in the areas where the project is implemented.
- Exposure of asbestos from school walls and roofs during reconstruction phases which may contaminate water and soils in the schools and surrounding areas, and may have a negative impact on the people exposed to it. Proper asbestos disposal will be among the responsibilities of the contractors.
- Contamination of ground and surface water as well as soils as a result of chemicals (oils, fuels and lubricants from machinery and vehicles working on site, remains of paints, etc.) particularly on sites located near waterways.
- Setting-up of semi-permanent work sites may cause negative impacts due to accumulation of solid waste, and disposal of human waste.
- The extraction of construction materials from excavations could constitute a source of adverse impacts on the natural environment in terms of loss of vegetation, but also the degradation of the landscapes and damage in natural habitats.
- Firewood for cooking and use of wood for reconstruction/ rehabilitation works and school materials (such as desks) may lead to deforestation in certain areas.
- Unsafe use of chemicals for the control of termites
- Loss of vegetation, soil pollution and groundwater, soil erosion, generation of solid and liquid waste
- The use of machines that run-on fuel, oils and lubricants in the workplace, may be a source of contamination of groundwater by infiltration, particularly in some communities where groundwater is on the surface.

9.4.2 Potential Adverse Social Impacts

- Noise and vibrations are common during construction and rehabilitation works
- Not using local workers for some of the construction works can lead to social turmoil or non-acceptance of activities. It is therefore highly recommended to hire local workers wherever possible. This will raise the acceptance of the population to the project even if they do not benefit directly from the expanded drinking water supply and will help to improve livelihoods in the region.
- Breathing in asbestos fibers can cause asbestosis and lung cancer in the long run if measures of precaution are not taken.
- Work related accidents may occur if necessary health, safety and hygiene measures are not taken.
- Poor performance of civil works contractors (and their supervisors) leading to unsuccessful incorporation of the proposed mitigation measures.
- In terms of local employment, the non-use of local resident manpower during the rehabilitation and construction of the infrastructures could cause some frustrations at the local level (and could lead to social conflicts).
- Acquisition of land may be required for rehabilitation or reconstruction works, which may lead to involuntary resettlement of local communities.
- Vulnerable groups such as women, children, and elderly do not benefit from the positive effects of the project.
- In the human context, the coming and going of vehicles carrying construction materials can create problems of traffic and mobility in general congestion, increasing thus the disturbance (noise, dust) that the population will be exposed, not to mention accidents of road. The same applies to the handling of powder materials (cement and sand), which can annoy the inhabitants of the surrounding areas (dust).
- Increase in HIV/AIDS rates as a result of workers coming from other areas of the country.
- The mixed construction process should involve the community, it widely known that effective community involvement varies from community to community, and hence it is expected that there will be communities with difficulties in getting involved in this process.
- The activities may have adverse impacts on particularly vulnerable groups such as orphans and vulnerable children, elderly, and women in terms of limited access to water, to potential resettlement because of the works, and in terms of disruptions as a result of the activities. It is therefore recommended that the rights of the vulnerable groups are safeguarded and that gender balance is ensured throughout the implementation of the activities under the project.

9.4.3 Positive Impacts

- Improvement of the teaching and learning facilities will have major positive effects on the education system in general: increase of the number of schools, particularly at the rural areas; improve of learning outcomes.
- Reintegration of pupils (girls and boys) into the school system, and particularly boost a qualitative and quantitative development of the education system in the concerned areas.
- The works will contribute towards recreating a resilient, safe and healthy school environments in areas that are exposed to recurrent floods.
- Reconstruction and rehabilitation will also contribute to the increase in the number of schools/ classrooms in target areas.
- Reconstruction and rehabilitation of schools can have a positive impact in the quality of water supply and improved sanitation (for schools as well as surrounding vulnerable communities) and sanitation facilities if these are included in the ToRs of the contractors and a budget is set aside for these purposes.
- Construction and rehabilitation works can contribute to job creation, where local populations are involved in the works, and this can increase their incomes and improve their living conditions.
- The construction and rehabilitation of schools will be done using a sustainable approach, with training of local artisans in the construction of infrastructures that are resilient to climate change. This knowledge may be expanded and may influence communities in building more resilient homes. In the long run the mixed construction methods being employed under the ERRP may reduce the damage and loss of residences of local communities in the event of future extreme climatic events.
- Empowered communities (in particular the most vulnerable) to construct infrastructure using mixed and resilient materials.

9.5 Contingency Emergency Response

This component will be providing immediate response to an Eligible Crisis or Emergency, as needed. This would finance emergency works in case of another disaster event by including a Contingency Emergency Response Component (CERC). The objective of this component is to help reduce damage to infrastructure, ensure business continuity, and enable early rehabilitation. The main goal during disaster recovery in general is to restore activities of households, communities, and other actors' activities to their previous condition without reproducing previous hazards and vulnerabilities (Lindell, M *in* Encyclopaedia of Natural Hazards, 2013).

Decree 54/2015 makes provisions for the exemption of activities related to natural disasters and emergencies in undertaking a full EIA or an EAS. Furthermore, the potential environmental and social impacts of this component cannot be ascertained, as the specific emergency response activities will only be known in the onset of an emergency. Notwithstanding this, and considering that the recovery processes may have adverse environmental and social impacts, this ESMF recommends due diligence in the recovery process. It is therefore recommended

that some sort of a general planning process for recovery is undertaken in advance of an emergency.

9.6 Mitigation measures for Potential Adverse Impacts

9.6.1 Mitigation Measures for Environmental Impacts

- Adverse environmental and social impacts can be minimized through the adoption of an Environmental and Social Management Plan (ESMP) that details suitable mitigation and management measures.
- Avoid or minimize clearing of vegetation during preparation for rehabilitation and reconstruction works in the targeted areas, to reduce chances of soil erosion and the damage of natural habitats. This can be done by carrying out works in areas that have already been cleared, where infrastructure was existent prior to the disaster/ emergency, or by minimizing clearing vegetation where new areas have been identify because it has been deemed that the existent ones are not appropriate.
- Irrigation infrastructure needs to be designed to ensure that localized erosion does not occur. Construction activities generally expose soil to erosion. Therefore, careful design for the rehabilitation and reconstruction of irrigation schemes can avoid the occurrence of erosion problems.
- Following the completion of construction work, vegetation should be established around structures so that bare soil is not exposed to erosive forces.
- Proper asbestos disposal will be among the responsibilities of the contractors. Asbestos can be disposed safely in sealed plastic containers to be buried for example in municipal landfills
- Ensure availability of adequate sanitary facilities for the construction workers close the working sites, to avoid contamination of water and soils from human waste in the area of work and surrounding areas.
- Avoid reconstruction works and work site waste disposals close to waterways to ensure the protection of water resources.
- Construction sites and areas of work ought to have suitable waste management regime in place as informed by the WBG General Guidelines on Waste Management² Guidelines which advocates establishment of waste management hierarchy that considers prevention, reduction, reuse, recovery, recycling, removal and only then disposal. Among other things, this framework promotes avoiding or minimizing the generation of waste as far as practicable; where waste generation cannot be avoided, look to minimize, recover, and reuse; and where waste cannot be recovered or reused, consider treating, destroying and disposing of in an environmentally sound way.

² WBG General EHS Guideline: Environmental Waste Management
<http://www.ifc.org/wps/wcm/connect/6e4e348048865839b4cef66a6515bb18/1-6%2BWaste%2BManagement.pdf?MOD=AJPERES>

9.6.2 Mitigation Measures for Social Impacts

- Ensure participation of all relevant stakeholders, including local communities in all processes of the project cycle, from planning and design phases, to implementation and participation.
- Considering the specific rights, needs, and vulnerabilities of women, orphans and marginalized people in relation to natural resources during recovery, and promote equitable access to recovery.
- Ensure that vulnerable groups are targeted and involved during recovery and reconstruction interventions, where possible approaches such as food for work may be employed for activities that do not require special skills.
- Build capacity for green recovery and reconstruction, and ensure consultation/coordination with relevant stakeholders (affected populations, interested parties, civil society) in recovery and reconstruction.
- Destruction of cultural and heritage sites should be completely avoided. The project proponents should determine whether the proposed project locations are in areas where cultural heritage is expected to be found either during construction or operation. The Chance Find Procedure is to be used, where any cultural heritage site or material is subsequently encountered during construction works. Where these are not related to conservation areas or heritage, the RPF should provide guidance on the transfer of this sites and compensation for the affected populations.
- The RPF should provide guidance on the mechanism and tools that should be employed to address the potential scope of resettlement and land acquisition, where involuntary resettlement is necessary. This includes the establishment of clear communication channels between the project and the PAPs to convey and report potential social conflicts. The Grievance Redress Mechanism (GRM) is recommended to be used to deal with potential grievances and dissatisfaction raised by the PAPs in relation to the project. In Mozambique, the mechanism raising grievances is usually as follows: i) issue raised firstly to the village chief, traditional leader, or village head; ii) then to the Head of Post; iii) to Consultative Council; iv) to the District Administrator and finally; v) to court. If communities feel their grievances are not adequately addressed, they have the option to go up to Provincial level or still further, national level.
- Conduct information sharing and awareness campaigns on the causes and preventative measures of HIV/AIDS, tuberculosis and other epidemics for reconstruction workers, suppliers as well as local communities.
- Ensure availability of adequate sanitary facilities for the construction workers close the working sites, to avoid contamination of water and soils from human waste which may have adverse impacts on the health of workers and population of the surrounding areas.
- Include other support measures such as safe water points, storage facilities, electricity etc. for project site workers.
- Ensure hygiene and security measures are respected in work sites to reduce risks of work-related accidents.

10. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

The purpose of the Environmental Management Plan (ESMP) in this section is to ensure effective and optimal environmental and social management of the projects. The ESMP there provides the relevant subcomponents of the project; the potential negative environmental and social impacts; proposed mitigation measures; and defines responsibilities for the implementation and monitoring of the measures.

Table 2: Environmental and social management plan

Project Activity	Environmental/ Social Impact	Mitigation Measures	Responsibility		Timeframe/ Periodicity
			Implementation of measures	Monitoring of measures	
Rehabilitation of Dykes and Damaged Weirs					
To be managed, implemented and monitored by the MOPHRH through DNGRH					
Environmental Impacts	Soil erosion can be expected to result from earth-moving activities	Implement appropriate soil erosion control measures such as minimizing run-off, building terraces and diversions, etc. Combine civil construction, tree-planting and small earth movements to help stabilize soils	Contractor	DPOPHRH District Services for Infrastructure (in loco) Environmental Focal Point/ Safeguards Specialist Team	Conditions to be verified and documented at the beginning of works, and verified upon completion of works
	Contamination of soils and water as a result of excavations	Superior soils should be separated/ removed and replaced/ placed back once the works have been concluded	Contractor	District Services for Infrastructure (in loco) Environmental Focal Point/ Safeguards Specialist Team	Conditions to be verified and documented at the beginning of works, and verified upon completion of works

	<p>Residual waters, chemicals and oils are discharged contaminating underground water and soils</p>	<p>Adequate drainage of water and/or other liquid wastes used during construction and operation phases of the Project</p> <p>Use of chemical products such as oils, lubricants and fuels should be limited and controlled/ supervised</p> <p>Drainage systems in the Project sites should be equipped with a water/ oil separator</p> <p>Guidelines and procedures on cleaning oil/ fuel/ chemical leaks should be made available</p>	Contractor	<p>DPOPHRH</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point/ Safeguards Specialist Team</p>	Monitored monthly
	<p>Vegetation clearance, soil disturbances, and modification of natural habitats</p>	<p>Avoid or minimize clearing of vegetation during preparation for rehabilitation and reconstruction works.</p> <p>Carry out works in that have already been cleared, where infrastructure was existent prior to the disaster/ emergency</p> <p>Vegetation should be established around structures so that bare soil is not exposed to erosive forces</p>	Contractor	<p>DPOPHRH</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point/ Safeguards Specialist Team</p>	Conditions to be verified and documented at the beginning of works, and verified upon completion of works

		Reinstatement of vegetation cleared following completion of works; rehabilitation of site's disturbed soils immediately after completion of works			
	Air pollution as a result of dust/ toxic chemicals in the air	<p>Watering surfaces to reduce dust and reduce usage of chemicals; and avoid fires</p> <p>Adequate preparation of construction material such as cement</p> <p>Reduction of speed limits and/ or access to roads that lead to the project areas</p> <p>Ensure regular maintenance of vehicles and equipment used on sites</p>	Contractor	<p>DPOPHRH</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point/ Safeguards Specialist Team</p>	Monitored on a monthly basis
	Setting-up of semi-permanent work sites may cause negative impacts due to accumulation of solid waste , and disposal of human waste	<p>Availability of adequate sanitary facilities for the construction workers close the working sites, to avoid contamination of water and soils</p> <p>The contractor should categories all waste, and should adopt the practice of recycling whenever possible</p>	Contractor	<p>DPOPHRH</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point/ Safeguards Specialist Team</p>	Monitored on a weekly basis

		Make provisions for access to potable water and washrooms during works and of water, sanitation and hygiene (WASH) programmes directed towards the local populations in targeted areas			
	Poorly installed channels may concentrate water in specific areas and subsequently drain the area and contribute to drying up wetlands.	Ensure that reconstruction process is managed adequately and that all stages of the works are monitored for quality control and quality assurance	Contractor	DPOPHRH District Services for Infrastructure (in loco) Environmental Focal Point/ Safeguards Specialist Team	Monitored on a monthly basis
	Quality of Water	Ensure water quality is adequate for human consumption and for agriculture in areas where dykes and weirs will be rehabilitated, and for which water will be used for irrigation (quality of water should be tested for salinity, and to determine necessary water treatment)	DPOPHRH	MOPHRH/ Safeguards Specialist team Provincial Directorate of Health/ District Health Services Provincial Laboratory	Monitored on a weekly basis
	Hydrological alterations may lead to significant increase in	PMP Distribute mosquito nets to project workers who remain on-	Contractor	DPOPHRH	Monitored on a trimester basis

	mosquito breeding sites	site as well as to local communities in surrounding area of the project Outbreaks of malaria, urinary infections and water-borne illnesses should be monitored		District Services for Infrastructure (in loco) Environmental Focal Point/ Safeguards Specialist Team	
Social Impacts	Social conflicts resulting from land uptake	Public consultations prior to any works/ during project preparation and throughout all phases of the Project according to the provisions of Decree 45/ 2004 and Ministerial Diploma 130/2006 Involve interested and affected people, directly or indirectly affected by the activities of the Project. If resettlement is unavoidable, the resettlement process has to be managed in accordance to the Law on Resettlement Decree n ^o 31/2012 of August 8, and should also be in conformity with the World Bank Safeguard Policy on Involuntary Resettlement OP/BP 4.12	DPOPHRH Consultant	MOPHRH Safeguards Specialist Team Steering Committee	Conditions to be verified and documented at the beginning of works, and verified upon completion of works

	<p>Public nuisance and health impacts resulting from inadequate disposal of solid wastes including demolition materials.</p>	<p>Use of chemical products such as oils, lubricants and fuels should be limited and controlled/ supervised</p> <p>Drainage systems in the Project sites should be equipped with a water/ oil separator</p> <p>The contractor should categories all waste, and should adopt the practice of recycling whenever possible</p>	Contractor	<p>DPOPHRH</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point/ Safeguards Specialist Team</p>	Monitored on a weekly basis
	<p>Noise pollution given the reconstruction works, as a result of operating machinery and equipment.</p>	<p>Choosing less noisy equipment and make use of equipment in good conditions</p> <p>Usage of silencers to reduce vibrations of equipment during construction phases</p> <p>Where necessary, reduce construction time and the running speed of noisy equipment</p> <p>Planning and logistics should be appropriate – plan noisy activities for early hours of the day and inform local inhabitants of activities that will result in noise and vibrations</p> <p>Monitor noise and vibrations</p>	Contractor	<p>DPOPHRH</p> <p>District Services for Infrastructure (in loco)</p> <p>Safeguards Specialist Team</p>	Monitored on a weekly basis

	<p>Risk of water borne illnesses such as cholera or malaria</p>	<p>Solid waste should be covered to avoid contamination of water</p> <p>Distribute mosquito nets to project workers who remain on-site as well as to local communities in surrounding area of the project</p> <p>Outbreaks of malaria, urinary infections and water-borne illnesses should be monitored</p>	Contractor	<p>DPOPHRH</p> <p>District Health Services</p> <p>Safeguards Specialist Team</p>	Monitored monthly
	<p>Increase in HIV/AIDS rates as a result of workers coming from other areas of the country.</p>	<p>Conduct information sharing and awareness campaigns on the causes and preventative measures of HIV/AIDS, tuberculosis and other epidemics for reconstruction workers, suppliers as well as local communities</p> <p>Condoms should be distributed to workers and surrounding communities, and health care should for workers should be made available</p>	NGOs or Community Based Organizations (CBOs)	<p>District Health Services</p> <p>DPOPHRH</p> <p>Safeguards Specialist Team</p>	Conditions to be verified and documented at the beginning of works, and verified upon completion of works
	<p>Work-related accidents as a result of lack of use of personal protective equipment by workers during the construction phase</p>	<p>Health and Safety requirements should be put in place:</p> <p>Restrict access to construction sites and make provisions for security guards at entrances and exits of construction sites</p>	Contractor	<p>DPOPHRH</p> <p>District Services for Infrastructure (in loco)</p>	Monitored on a weekly basis

		<p>Ensure that workers know how to swim – where construction sites are close to water</p> <p>Make provisions for proper training on the use of equipment as well as training on health and safety procedures in the workplace</p> <p>Provide safety equipment to workers (such as helmets, gloves, goggles, boots) etc.</p> <p>Make provisions for a health unit or first aid and -prepare an emergency response plan</p> <p>Avoid working at night, and when this is inevitable ensure that sufficient lighting is available for night works</p> <p>Establish speed limits at site areas to avoid accidents</p>		Environmental Focal Point/ Safeguards Specialist Team	
	Fire outbreaks in project areas as a result of exposure of flammable materials during reconstruction works.	Availability of fire extinguishing equipment and/or fire alarm systems and appropriate storage areas for chemicals, hazardous and flammable materials to reduce risks	Contractor	INIR at provincial level District Services for Infrastructure (in loco)	Monitored on a monthly basis

		Proper storage of dangerous chemical products at the Project sites		Environmental Focal Point	
	Non-use of local resident manpower during the rehabilitation and construction of the infrastructures could cause some frustrations at the local level (and could lead to social conflicts).	<p>Highly recommended to hire local workers wherever possible. This will raise the acceptance of the population to the project</p> <p>Priority be given to local construction firms with knowledge of the local social norms</p>	Contractor	<p>DPOPHRH</p> <p>District Services for Infrastructure (in loco)</p> <p>Safeguards Specialist Team</p>	Conditions to be verified and documented at the beginning of works, and verified upon completion of works
	Destruction of cultural and heritage sites for use of spaces during rehabilitation or reconstruction works	<p>Site areas should be identified and agreed to prior to the start of the works</p> <p>Destruction of cultural and heritage sites should be completely avoided. The Chance Finds approach should be used where cultural heritage sites are identified after the works have commenced.</p> <p>Where these are not related to conservation areas or heritage, the RPF should provide guidance on the transfer of this sites and compensation for the affected populations</p>	DPOPHRH	<p>District Services for Infrastructure</p> <p>Provincial Directorate of Culture (DPC)</p> <p>Safeguards Specialist Team</p>	Conditions to be verified and documented at the beginning of works, and verified upon completion of works

		Chance Find Procedures to be Adopted: <ol style="list-style-type: none"> 1. Identifier should cease all activities in the site and its proximities 2. Identifier should inform the supervisor 3. Supervisor should ensure site is secured and has limited/ controlled access 4. Site supervisor should inform project proponent, who will determine subsequent steps 			
Rehabilitation of Rural Infrastructure in Maganja da Costa To be managed, implemented and monitored by the MASA, through INIR					
Environmental Impacts	Soil erosion resultant from excavations or other earth moving activities	<p>Rehabilitation of site's disturbed soils immediately after completion of works</p> <p>Vegetation should be established around structures so that bare soil is not exposed to erosive forces</p> <p>Irrigation infrastructure needs to be designed to ensure that localized erosion does not occur</p> <p>Implement appropriate soil erosion control measures such as</p>	Contractor	INIR at provincial level District Services for Infrastructure (in loco) Safeguards Team	Conditions to be verified and documented at the beginning of works, and verified upon completion of works

		<p>minimizing run-off, building terraces and diversions, etc.</p> <p>Combine civil construction, tree-planting and small earth movements to help stabilize soils</p>			
	Loss in vegetation and natural habitats of plants and animals	<p>Avoid or minimize clearing of vegetation during preparation for rehabilitation and reconstruction works.</p> <p>Carry out works in that have already been cleared, where infrastructure was existent prior to the disaster/ emergency</p> <p>Reinstatement of vegetation cleared following completion of works</p>	Contractor	<p>INIR at provincial level</p> <p>Safeguards Team</p>	<p>Conditions to be verified and documented at the beginning of works, and verified upon completion of works</p>
	Soil compaction resulting from the use of heavy equipment and machinery on site	Careful choice of equipment and machinery and should take into account size of the location/ area where works will be carried out	Contractor	<p>INIR at provincial level</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	Prior to commencement of works
	Contamination of water and soils as a result of chemicals (oils, fuels and	Superior soils should be separated/ removed and replaced/ placed back once the works have been concluded	Contractor	INIR at provincial level	Conditions to be verified and documented at the beginning of

	lubricants from machinery and vehicles working on site, remains of paints, etc.).	<p>Use of chemical products such as oils, lubricants and fuels should be limited and controlled/ supervised</p> <p>Drainage systems in the Project sites should be equipped with a water/ oil separator</p> <p>The contractor should categories all waste, and should adopt the practice of recycling whenever possible</p>		<p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	<p>works, and verified upon completion of works</p> <p>Monitored monthly</p>
	Water quality	Ensure water quality is adequate for human consumption and for agriculture purposes in the areas where the irrigation systems will be rehabilitated (quality of water should be tested for salinity, and to determine necessary water treatment)	AIAS	<p>AIAS</p> <p>Provincial Directorate of Health/ District Health Services</p> <p>Provincial Laboratory</p>	Monitored on a trimester basis
	Air pollution resulting from dusts and use of chemicals	<p>Watering surfaces to reduce dust and reduce usage of chemicals; and avoid fires</p> <p>Adequate preparation of construction material such as cement</p>	Contractor	<p>INIR at provincial level</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	Monitored monthly

		<p>Reduction of speed limits and/ or access to roads that lead to the project areas</p> <p>Ensure regular maintenance of vehicles and equipment used on sites</p>			
	<p>Setting-up of semi-permanent work sites may cause accumulation of solid waste, and disposal of human waste which may contaminate water and soils in sites</p>	<p>Availability of adequate sanitary facilities for the construction workers close the working sites, to avoid contamination of water and soils</p>	Contractor	<p>INIR at provincial level</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	Monitored monthly
	<p>Acquisition of land for rehabilitation or reconstruction works, which may lead to involuntary resettlement</p>	<p>Public consultations prior to any works/ during project preparation and throughout all phases of the Project according to the provisions of Decree 45/ 2004 and Ministerial Diploma 130/2006 on the public consultation process, which should involve interested and affected people, directly or indirectly affected by the activities of the Project</p> <p>If resettlement is unavoidable, the resettlement process has to be managed in accordance to the Law on Resettlement Decree n^o</p>	<p>INIR</p> <p>Consultant</p>	<p>INIR</p> <p>Steering Committee</p>	<p>Conditions to be verified and documented at the beginning of works, and verified upon completion of works</p>

		31/2012 of August 8, and should also be in conformity with the World Bank Safeguard Policy on Involuntary Resettlement OP/BP 4.12			
Social Impacts	Non-use of local resident manpower during the rehabilitation and construction of the infrastructures	<p>Highly recommended to hire local workers wherever possible. This will raise the acceptance of the population to the project</p> <p>Priority be given to local construction firms with knowledge of the local social norms</p>	Contractor	<p>INIR at provincial level</p> <p>District Services for Infrastructure (in loco)</p>	Conditions to be verified and documented at the beginning of works, and verified upon completion of works
	Accumulation of solid waste and inadequate disposal of human waste can lead to health issues	<p>Availability of adequate sanitary facilities for the construction workers close the working sites, to avoid contamination of water and soils</p> <p>The contractor should categories all waste, and should adopt the practice of recycling whenever possible</p> <p>Make provisions for access to potable water and washrooms during works and of water, sanitation and hygiene (WASH) programmes directed towards the local populations in targeted areas</p>	Contractor	<p>INIR at provincial level</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	Monitored monthly

	Occupation of private land by contractors during works	Public consultation with local communities, and prior authorization on areas that can be used by contractors for setting-up temporary camp-sites, disposal of waste, storage and parking of vehicles, equipment and machinery to be used in construction site	Contractor	INIR District Services for Infrastructure (in loco)	Conditions to be verified and documented at the beginning of works, and verified upon completion of works
	Noise pollution given the reconstruction works, as a result of operating machinery and equipment.	<p>Choosing less noisy equipment and make use of equipment in good conditions</p> <p>Usage of silencers to reduce vibrations of equipment during construction phases</p> <p>Where necessary, reduce construction time and the running speed of noisy equipment</p> <p>Planning and logistics should be appropriate – plan noisy activities for early hours of the day and inform local inhabitants of activities that will result in noise and vibrations</p> <p>Monitor noise and vibrations</p>	Contractor	<p>INIR at provincial level</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	Monitored on a weekly basis
	Risk of water borne illnesses such as cholera or malaria	Solid waste should be covered to avoid contamination of water	Contractor	INIR at provincial level	Monitored on a trimester basis

		<p>Distribute mosquito nets to project workers who remain on-site as well as to local communities in surrounding area of the project</p> <p>Outbreaks of malaria, urinary infections and water-borne illnesses should be monitored</p>		District Health Services	
	<p>Increase in HIV/AIDS rates as a result of workers coming from other areas of the country.</p>	<p>Conduct information sharing and awareness campaigns on the causes and preventative measures of HIV/AIDS, tuberculosis and other epidemics for reconstruction workers, suppliers as well as local communities</p> <p>Condoms should be distributed to workers and surrounding communities, and health care should for workers should be made available</p>	NGOs or Community Based Organizations (CBOs)	<p>District Health Services</p> <p>INIR</p>	<p>Conditions to be verified and documented at the beginning of works, and verified upon completion of works</p>
	<p>Work-related accidents as a result of lack of use of personal protective equipment by workers during the construction phase</p>	<p>Health and Safety requirements should be put in place: Restrict access to construction sites and make provisions for security guards at entrances and exits of construction sites</p>	Contractor	<p>INIR at provincial level</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	<p>Monitor on a weekly basis</p>

		<p>Ensure that workers know how to swim – where construction sites are close to water</p> <p>Make provisions for proper training on the use of equipment as well as training on health and safety procedures in the workplace</p> <p>Provide safety equipment to workers (such as helmets, gloves, goggles, boots) etc. including ensure signs placed on sites</p> <p>Make provisions for a health unit or first aid and -prepare an emergency response plan</p> <p>Avoid working at night, and when this is inevitable ensure that sufficient lighting is available for night works</p> <p>Establish speed limits at site areas to avoid accidents</p>			
	Fire outbreaks in project areas as a result of exposure of	Availability of fire extinguishing equipment and/or fire alarm systems and appropriate storage	Contractor	INIR at provincial level	Monitor on a trimester basis

	flammable materials during reconstruction works.	<p>areas for chemicals, hazardous and flammable materials to reduce risks.</p> <p>Proper storage of dangerous chemical products at the Project sites.</p>		<p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	
	Destruction of cultural and heritage sites for use of spaces during rehabilitation or reconstruction works	<p>Site areas should be identified and agreed to prior to the start of the works</p> <p>Destruction of cultural and heritage sites should be completely avoided.</p> <p>Where previously unknown cultural heritage sites are found during construction, the chance finds approach shall be used – this should include consultation with local communities, transfer or removal where possible, and restoration for critical sites.</p> <p>Where these are not related to conservation areas or heritage, the RPF should provide guidance on the transfer of this sites and compensation for the affected populations.</p>	<p>INIR</p> <p>Contractor</p>	<p>District Services for Infrastructure</p> <p>Provincial Directorate of Culture (DPC)</p>	<p>Conditions to be verified and documented at the beginning of works, and verified upon completion of works</p>

		Chance Find Procedures to be Adopted: <ol style="list-style-type: none"> 1. Identifier should cease all activities in the site and its proximities 2. Identifier should inform the supervisor 3. Supervisor should ensure site is secured and has limited/ controlled access 4. Site supervisor should inform project proponent, who will determine subsequent steps 			
Rehabilitation of Mocuba Water Supply System To be managed, implemented and monitored by AIAS					
Environmental Impacts	Soil erosion resultant from excavations or other earth moving activities	Rehabilitation of site's disturbed soils immediately after completion of works Implement appropriate soil erosion control measures such as minimizing run-off, building terraces and diversions, etc. Combine civil construction, tree-planting and small earth movements to help stabilize soils	Contractor	AIAS at provincial level District Services for Infrastructure (in loco) Environmental Focal Point	Conditions to be verified and documented at the beginning of works, and verified upon completion of works
	Loss in vegetation and natural habitats of plants and	Avoid or minimize clearing of vegetation during preparation for	Contractor	AIAS at provincial level	Conditions to be verified and documented at the

	<p>animals, and may affect some sensitive habitats along the riverbanks.</p>	<p>rehabilitation and reconstruction works.</p> <p>Carry out works in that have already been cleared, where infrastructure was existent prior to the disaster/ emergency</p> <p>Vegetation should be established around structures so that bare soil is not exposed to erosive forces</p> <p>Reinstatement of vegetation cleared following completion of works</p>		<p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	<p>beginning of works, and verified upon completion of works</p>
	<p>Soil compaction resulting from the use of heavy equipment and machinery on site</p>	<p>Careful choice of equipment and machinery and should take into account size of the location/ area where works will be carried out</p>	<p>Contractor</p>	<p>AIAS at provincial level</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	<p>Monitored in the beginning of works</p>
	<p>Contamination of water and soils as a result of chemicals (oils, fuels and lubricants from machinery and vehicles working on</p>	<p>Avoid reconstruction works and work site waste disposals close to waterways to ensure the protection of water resources</p> <p>Superior soils should be separated/ removed and replaced/</p>	<p>Contractor</p>	<p>AIAS at provincial level</p> <p>District Services for Infrastructure (in loco)</p>	<p>Monitored monthly</p>

	<p>site, remains of paints, etc.).</p> <p>placed back once the works have been concluded</p> <p>Use of chemical products such as oils, lubricants and fuels should be limited and controlled/ supervised</p> <p>Drainage systems in the Project sites should be equipped with a water/ oil separator</p>		Environmental Focal Point	
	<p>Water quality</p> <p>Ensure water quality is adequate for human consumption (quality of water should be tested for salinity, and to determine necessary water treatment)</p>	AIAS	<p>AIAS</p> <p>District Health Services</p> <p>Provincial Laboratory</p>	<p>Conditions to be verified and documented at the beginning of works, and verified upon completion of works</p>
	<p>Air pollution as a result of dust/ toxic chemicals in the air</p> <p>Watering surfaces to reduce dust and reduce usage of chemicals; and avoid fires</p> <p>Adequate preparation of construction material such as cement</p> <p>Reduction of speed limits and/ or access to roads that lead to the project areas</p>	Contractor	<p>AIAS at provincial level</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	<p>Monitored on a weekly basis</p>

		Ensure regular maintenance of vehicles and equipment used on sites			
	Acquisition of land may be required for rehabilitation or reconstruction works, which may lead to involuntary resettlement of local communities	<p>Public consultations prior to any works/ during project preparation and throughout all phases of the Project according to the provisions of Decree 54/ 2015 and Ministerial Diploma 130/2006 on the public consultation process, which should involve interested and affected people, directly or indirectly affected by the activities of the Project.</p> <p>If resettlement is unavoidable, the resettlement process has to be managed in accordance to the Law on Resettlement Decree n^o 31/2012 of August 8, and should also be in conformity with the World Bank Safeguard Policy on Involuntary Resettlement OP/BP 4.12.</p>	AIAS Consultant	AIAS Steering Committee	Conditions to be verified and documented at the beginning of works, and verified upon completion of works
Social Impacts	Potential for social conflicts between workers at site and members of local community	Ensure participation of all relevant stakeholders, including local communities in all processes of the project cycle	Contractor AIAS	AIAS District Services for Infrastructure (in loco)	Monitored on a trimester basis

	<p>Noise pollution and vibrations during reconstruction works</p>	<p>Choosing less noisy equipment and make use of equipment in good conditions</p> <p>Usage of silencers to reduce vibrations of equipment during construction phases</p> <p>Where necessary, reduce construction time and the running speed of noisy equipment</p> <p>Planning and logistics should be appropriate – plan noisy activities for early hours of the day and inform local inhabitants of activities that will result in noise and vibrations</p> <p>Monitor noise and vibrations</p>	Contractor	<p>AIAS at provincial level</p> <p>District Services for Infrastructure (in loco)</p>	Monitored on a weekly basis
	<p>Water shortages in some areas during the rehabilitation or emergency repairs works</p>	<p>Ensure optimal water management to avoid disruption of water supply</p> <p>Establish alternative water sources during rehabilitation works</p> <p>Ensure local communities are informed of possible water shortages prior to and during works and that they are informed</p>	Contractor	<p>AIAS at provincial level</p> <p>District Services for Infrastructure (in loco)</p>	Monitored on a weekly basis

		of where to attain alternative sources			
	Work-related incidents and accidents	<p>Health and Safety requirements should be put in place and should be included the contract/ work plan of the Contractors: Restrict access to construction sites and make provisions for security guards at entrances and exits of construction sites</p> <p>Ensure that workers know how to swim – where construction sites are close to water</p> <p>Make provisions for proper training on the use of equipment as well as training on health and safety procedures in the workplace</p> <p>Provide safety equipment to workers (such as helmets, gloves, goggles, boots) etc.</p> <p>Make provisions for a health unit or first aid and -prepare an emergency response plan</p>	Contractor	<p>AIAS at provincial level</p> <p>District Services for Infrastructure (in loco)</p>	Monitored on a weekly basis

		Avoid working at night, and when this is inevitable ensure that sufficient lighting is available for night works			
		Establish speed limits at site areas to avoid accidents			
	Inadequate sanitation in construction areas which can be mitigated/ avoided with the provision of adequate washing and toilet facilities close to the works	Availability of adequate sanitary facilities for the construction workers close the working sites, to avoid contamination of water and soils	Contractor	AIAS Districts Services for Infrastructure District Health Services	Monitored monthly
	Water borne illnesses resultant from drinking contaminated water	Solid waste should be covered to avoid contamination of water Make provisions for access to potable water and washrooms during works and of water, sanitation and hygiene (WASH) programmes directed towards the local populations in targeted areas	Contractor	AIAS District Health Services Provincial Laboratory	Monitored on a weekly basis
	Non-use of local resident manpower during the rehabilitation and construction of the infrastructures could	Highly recommended to hire local workers wherever possible. This will raise the acceptance of the population to the project Priority should be given to local construction firms with	Contractor	AIAS Districts Services for Infrastructure	Conditions to be verified and documented at the beginning of works, and verified

	cause some frustrations at the local level and could lead to social conflicts.	knowledge of the local social norms			upon completion of works
	Increase in HIV/AIDS rates as a result of workers coming from other areas of the country.	Conduct information sharing and awareness campaigns on the causes and preventative measures of HIV/AIDS, tuberculosis and other epidemics for reconstruction workers, suppliers as well as local communities	NGOs or Community Based Organizations (CBOs)	AIAS District Health Services	Conditions to be verified and documented at the beginning of works, and verified upon completion of works
	Destruction of cultural and heritage sites	<p>Site areas should be identified and agreed to prior to the start of the works</p> <p>Destruction of cultural and heritage sites should be completely avoided.</p> <p>Where previously unknown cultural heritage sites are found during construction, the chance finds approach shall be used – this should include consultation with local communities, transfer or removal where possible, and restoration for critical sites</p> <p>Where these are not related to conservation areas or heritage, the RPF should provide guidance on</p>	AIAS Consultant	AIAS Provincial Directorate of Culture	Conditions to be verified and documented at the beginning of works, and verified upon completion of works

		<p>the transfer of this sites and compensation for the affected populations.</p> <p>Chance Find Procedures to be Adopted:</p> <ol style="list-style-type: none"> 1. Identifier should cease all activities in the site and its proximities 2. Identifier should inform the supervisor 3. Supervisor should ensure site is secured and has limited/ controlled access 4. Site supervisor should inform project proponent, who will determine subsequent steps 			
Rehabilitation and Reconstruction of Resilience Schools To be managed, implemented and monitored by MINEDH					
Environmental Impacts	Soil erosion resultant from excavations or other earth moving activities	<p>Rehabilitation of site's disturbed soils immediately after completion of works</p> <p>Implement appropriate soil erosion control measures such as minimizing run-off, building terraces and diversions, etc.</p>	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	Conditions to be verified and documented at the beginning of works, and verified upon completion of works

		Combine civil construction, tree-planting and small earth movements to help stabilize soils			
	Loss in vegetation and natural habitats of plants and animals	<p>Avoid or minimize clearing of vegetation during preparation for rehabilitation and reconstruction works.</p> <p>Carry out works in that have already been cleared, where infrastructure was existent prior to the disaster/ emergency</p> <p>vegetation should be established around structures so that bare soil is not exposed to erosive forces</p> <p>Reinstatement of vegetation cleared following completion of works</p>	Contractor		Conditions to be verified and documented at the beginning of works, and verified upon completion of works
	Soil compaction resulting from the use of heavy equipment and machinery on site	Careful choice of equipment and machinery and should consider the size of the location/ area where works will be carried out	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	Prior to commencement of activities
	Contamination of water and soils as a result of chemicals	Superior soils should be separated/ removed and replaced/	Contractor	MINEDH/ DIPLAC-CEE	

	(oils, fuels and lubricants from machinery and vehicles working on site, remains of paints, etc.).	<p>placed back once the works have been concluded</p> <p>Use of chemical products such as oils, lubricants and fuels should be limited and controlled/ supervised.</p> <p>Drainage systems in the Project sites should be equipped with a water/ oil separator.</p>		<p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	
	Exposure of asbestos from school walls and roofs may contaminate water and soils in schools and surrounding areas	<p>Proper asbestos disposal - Asbestos can be disposed safely in sealed plastic containers to be buried for example in municipal landfills</p>	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	Monitored monthly
	Setting-up of semi-permanent work sites may cause accumulation of solid waste, and disposal of human waste which may contaminate water and soils in sites	<p>Availability of adequate sanitary facilities for the construction workers close the working sites, to avoid contamination of water and soils</p> <p>The contractor should categories all waste, and should adopt the practice of recycling whenever possible</p>	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	Monitored on a weekly basis

		Make provisions for access to potable water and washrooms during works and of water, sanitation and hygiene (WASH) programmes directed towards the local populations in targeted areas			
	Air pollution as a result of dust/ toxic chemicals in the air	<p>Watering surfaces to reduce dust and reduce usage of chemicals; and avoid fires</p> <p>Adequate preparation of construction material such as cement</p> <p>Reduction of speed limits and/ or access to roads that lead to the project areas</p> <p>Ensure regular maintenance of vehicles and equipment used on sites</p>	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	Monitored on a weekly basis
	Firewood for cooking and use of wood for reconstruction/ rehabilitation and reconstruction works with local materials may lead to deforestation	<p>Sustainable options and use of alternative energy sources for the different sites</p> <p>Include awareness rising in the curriculum</p>	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	Monitored monthly

	Unsafe use of chemicals for termite control	Safe use of chemicals included in contracts PMP	Contractor	MINEDH/ DIPLAC-CEE District Services for Infrastructure (in loco) Environmental Focal Point	Monitored monthly
Social Impacts	Acquisition of land may be required for rehabilitation or reconstruction works, which may lead to involuntary resettlement of local communities	Public consultations prior to any works/ during project preparation and throughout all phases of the Project according to the provisions of Decree 54/ 2015 and Ministerial Diploma 130/2006 on the public consultation process, which should involve interested and affected people, directly or indirectly affected by the activities of the project. If resettlement is unavoidable, the resettlement process has to be managed in accordance to the Law on Resettlement Decree n ^o 31/2012 of August 8, and should also be in conformity with the World Bank Safeguard Policy on Involuntary Resettlement OP/BP 4.12.	MINEDH/ DIPLAC-CEE Consultant	MINEDH Steering Committee	Conditions to be verified and documented at the beginning of works, and verified upon completion of works

	<p>Non-use of local resident manpower during the rehabilitation and construction of the infrastructures could cause some frustrations at the local level (and could lead to social conflicts).</p>	<p>Highly recommended to hire local workers wherever possible. This will raise the acceptance of the population to the project.</p> <p>Priority be given to local construction firms with knowledge of the local social norms</p>	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p>	<p>Conditions to be verified and documented at the beginning of works, and verified upon completion of works</p>
	<p>Destruction of cultural heritage sites</p>	<p>Destruction of cultural heritage should be completely avoided</p> <p>Identification of location process should determine whether the proposed location of a project is in areas where cultural heritage is expected to be found, either during construction or operations.</p> <p>Prior consultations with local communities, PAPs and interested persons is key in identification of construction areas, in identify cultural heritage of importance</p> <p>Allow for continued access to the cultural site or provision of alternative access routes</p>	<p>MINEDH/ DIPLAC-CEE</p> <p>Contractor</p>	<p>Provincial Directorate of Culture</p> <p>District Services for Infrastructure (in loco)</p>	<p>Conditions to be verified and documented at the beginning of works, and verified upon completion of works</p>

		Restoration of the functionality of the cultural heritage that is discovered and tampered with during construction works			
	Breathing asbestos fibers can cause asbestosis and lung cancer in the long run if measures of precaution are not taken	<p>Proper asbestos disposal - Asbestos can be disposed safely in sealed plastic containers to be buried for example in municipal landfills</p> <p>Workers to be well equipped for works – gloves, masks, helmets, boots</p>	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p>	Monitored on a weekly basis
	Setting-up of semi-permanent work sites may cause negative impacts due to accumulation of solid waste, and disposal of human waste	<p>The contractor should categories all waste, and should adopt the practice of recycling whenever possible</p> <p>Make provisions for access to potable water and washrooms during works and of water, sanitation and hygiene (WASH) programmes directed towards the local populations in targeted areas</p>	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p>	Monitored on a weekly basis
	Disruption in school classes as a result from noise	<p>Choosing less noisy equipment and make use of equipment in good conditions</p> <p>Usage of silencers to reduce vibrations of equipment during construction phases</p>	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p>	Monitored on a weekly basis

		<p>Where necessary, reduce construction time and the running speed of noisy equipment; choose to undertake works during school holiday period to avoid disruptions in learning environment</p> <p>Planning and logistics should be appropriate – plan noisy activities for early hours of the day and inform local inhabitants of activities that will result in noise and vibrations</p> <p>Monitor noise and vibrations</p>			
	<p>Work-related accidents as a result of lack of use of personal protective equipment by workers during the construction</p>	<p>Health and Safety requirements should be put in place: Restrict access to construction sites and make provisions for security guards at entrances and exits of construction sites</p> <p>Ensure that workers know how to swim – where construction sites are close to water</p> <p>Make provisions for proper training on the use of equipment as well as training on health and</p>	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p>	Monitored on a weekly basis

		<p>safety procedures in the workplace</p> <p>Provide safety equipment to workers (such as helmets, gloves, goggles, boots) etc.</p> <p>Make provisions for a health unit or first aid and -prepare an emergency response plan</p> <p>Avoid working at night, and when this is inevitable ensure that sufficient lighting is available for night works</p> <p>Establish speed limits at site areas to avoid accidents</p>			
	Fire outbreaks in project areas as a result of exposure of flammable materials during reconstruction works.	<p>Availability of fire extinguishing equipment and/or fire alarm systems and appropriate storage areas for chemicals, hazardous and flammable materials to reduce risks</p> <p>Proper storage of dangerous chemical products at the Project sites</p>	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal Point</p>	Monitored monthly
	Increase in HIV/AIDS rates as a result of workers	Conduct information sharing and awareness campaigns on the causes and preventative measures of HIV/AIDS, tuberculosis and	NGOs or Community Based Organizations (CBOs)	MINEDH/ DIPLAC-CEE	Conditions to be verified and documented at the beginning of

	coming from other areas of the country.	other epidemics for reconstruction workers, suppliers as well as local communities		Provincial Directorate of Health/ District Health Services	works, and verified upon completion of works
	Destruction of cultural and heritage sites	<p>Destruction of cultural and heritage sites should be completely avoided.</p> <p>Identification of location process should determine whether the proposed location of the project is in areas where cultural heritage is expected to be found</p> <p>Prior consultations with local communities, PAPs and interested persons in identification of construction areas in identifying cultural heritage</p> <p>Restoration of the functionality of the cultural heritage that is discovered and tampered with during construction works</p> <p>Where these are not related to conservation areas or heritage, the RPF should provide guidance on the transfer of this sites and compensation for the affected populations.</p>	<p>MINEDH/ DIPLAC-CEE</p> <p>Consultant</p>	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p>	<p>Conditions to be verified and documented at the beginning of works, and verified upon completion of works</p>

		Chance Find Procedures to be Adopted: <ol style="list-style-type: none"> 1. Identifier should cease all activities in the site and its proximities 2. Identifier should inform the supervisor 3. Supervisor should ensure site is secured and has limited/ controlled access 4. Site supervisor should inform project proponent, who will determine subsequent steps 			
	Non-use of local resident manpower during the rehabilitation and construction of the infrastructures could cause some frustrations at the local level (and could lead to social conflicts).	<p>Highly recommended to hire local workers wherever possible. This will raise the acceptance of the population to the project.</p> <p>Priority be given to local construction firms with knowledge of the local social norms</p>	Contractor	<p>MINEDH/ DIPLAC-CEE</p> <p>District Services for Infrastructure (in loco)</p>	Conditions to be verified and documented at the beginning of works, and verified upon completion of works
	Inadequate sanitation in construction areas which can be mitigated/ avoided with the provision of	Availability of adequate sanitary facilities for the construction workers close the working sites, to avoid contamination of water and soils	Contractor	MINEDH/ DIPLAC-CEE	Monitored on a monthly basis

	adequate washing and toilet facilities close to the works.			District Services for Infrastructure (in loco)	
	Risk of water borne illnesses such as cholera or malaria	<p>Solid waste should be covered to avoid contamination of water</p> <p>Distribute mosquito nets to project workers who remain on-site as well as to local communities in surrounding area of the project</p> <p>Outbreaks of malaria, urinary infections and water-borne illnesses should be monitored</p>	MINEDH/ DIPLAC-CEE	<p>District Services for Infrastructure (in loco)</p> <p>District Health Services</p>	Monitored on a trimester basis
	Use of low quality construction materials	<p>Standards of construction materials and guidelines provided and adhered to in construction of resilience schools.</p> <p>Monitoring, supervision and inspection of construction works intensified</p>	MIDENDH/ DIPLAC –CEE	<p>District Services for Infrastructure (in loco)</p> <p>Environmental Focal point</p>	Monitored on a weekly basis
	Use of local construction materials, such as wood, may mean rapid deterioration of schools due to pests and plagues	Refer to PMP			

11. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN MONITORING AND REPORTING REQUIREMENTS

Monitoring and reporting on progress are critical areas for the successful implementation of the present EMSF as well as of the overall ERRP project. Reporting is based on a set of indicators which should be reported on, on a regular basis with specific responsibilities indicators set out here will be mainstreamed into the overall monitoring and evaluation (M&E) system for the project. The specific objective of the monitoring process is to ensure that the ESMP is complied with and verified at all levels and stages of the project implementation cycle. Monitoring shall be a continuous process and should include the status of compliance as well as achievement of the objectives of the project.

The Safeguards team of inter- institutional coordination team and of the implementing institutions shall be responsible for coordinating and monitoring the implementation of the ESMF and ESMP. The teams will be responsible for implementing sensitization programmes with the view of informing interested and affected persons of the framework, how it works and what is expected with it.

It is expected that continuous monitoring of the ESMP will guarantee:

- That all activities of the project are implemented as required and as per the requirements established by the present ESMF;
- Where issues are encountered during implementation of the project, these are dealt with immediately or as early as possible to prevent them from adversely impacting the results of the project;
- That the environmental and social mitigation measures identified in the present document or any additional measures identified during the course of implementation are reflected in the implementation and monitoring plans as well as in the agreements signed with contractors.

Given the number of institutions involved in the implementation of the ERRP, it is recommended that the inter-institution coordination team, with the authorization of the Steering Committee, coordinates and liaises with other relevant government institutions with regards to environmental and social monitoring of the project. Weekly, monthly and quarterly reports shall be prepared and distributed to all relevant entities and should include the following:

- Calendar or work plan for implementation
- Involvement of project affected persons
- Allocation of funds
- Arising issues and solutions identified and put in place during implementation

- Level of compliance of timelines and social, environmental, health and safety contractual obligations of contractors
- Level of compliance of the site engineer in terms of supervision and monitoring of social, environmental, health and safety aspects of the project.

It is recommended that an external consultant is hired to monitor, together with the inter-institutional coordination safeguards team, compliance with the mitigation measures presented in the present document on a quarterly basis.

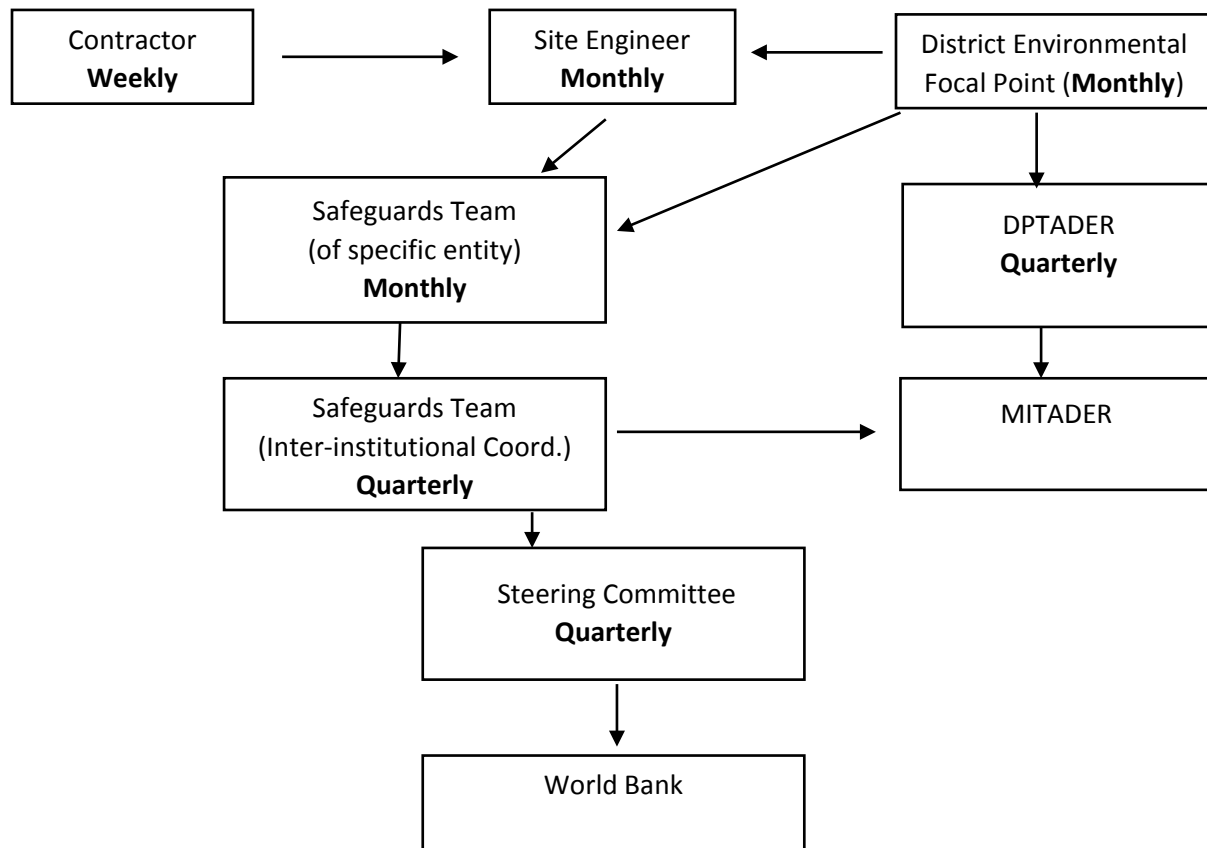


Figure 3: Flowchart of events and entities responsible for Reporting the ESMP

As presented on the flow chart above, monitoring and reporting responsibilities will be as follows: The contractor shall report verbally on a weekly basis to the site engineer, and shall submit monthly progress reports to the site engineer on compliance with the general conditions on site, progress on the ESMP if any, and on his/ her own Health, Hygiene and Safety Management Plan. The site engineer shall report on a monthly basis to the specific implementing entity's safeguard team responsible for a particular sub-component of the ERRP. The specific safeguards team will be expected to report on a monthly basis to the safeguards team at the inter-institutional coordination

entity responsible for the oversight and day-to-day management of the ERRP, this team will report to the Steering Committee on a quarterly-basis and the reports shall be submitted to the World Bank.

The District Environmental Focal Point shall liaise with the site engineer on a weekly basis and shall report to the Provincial Directorate (DPTADER) on progress and compliance of the activities being implemented at local level on a monthly basis. The District focal point may also provide reports or updates on compliance to the specific implementing institution's safeguard team on a monthly basis. A report shall be submitted to MITADER on a quarterly basis.

The ESMF implementation and monitoring should be carried out by each of the project proponents, in conjunction with provincial and district authorities, and following consultation with affected persons. District authorities (SDAE/SDPI) assisted by DPTADER and/or ERRP funded technical assistance will prepare annual monitoring reports that include information on the implementation of the ESMF. DPTADER is required to conduct annual inspections for all category B projects. Annual reviews of the implementation of the ESMF will be carried out by an independent local consultant, NGO or another service provider that is not involved in the ERRP, subject to by the Steering Committee and the World Bank. Independently-commissioned bi-annual environmental auditing should be carried out.

The objective is not to have multiple reports, but to ensure that the safeguards recommendations and mitigation measures are indeed being complied with, monitored and reported on at all levels, and that attention is provided to arising environmental and social issues as early as possible without compromising the results of the project.

12. ENVIRONMENTAL AND SOCIAL SCREENING PROCESS

The screening process described in this section is aimed at determining which activities (reconstruction/rehabilitation works) are likely to result in significant negative environmental and social effects with a view to determine appropriate impact mitigation measures for those activities, and ensure environmental sustainability of sub-projects undertaken in the Project areas, through effective monitoring of impacts during the construction/rehabilitation phase of works in the cities. The outcome of the screening process will determine the extent of environmental considerations required preceding the carrying out of activities of the Project related to construction and rehabilitation works.

For reconstruction/rehabilitation works, the MITADER Environmental Screening Form (Annex 2) has been considered. However, the form does not fully address some of the key environmental and social effects likely to result from the proposed activities. Thus, an Environmental and Social

Screening Form (Annex 3) has been devised to support environmental and social decision-making of the proposed works.

The form is also designed to be used by the persons involved in the implementation of the program, reviewers and relevant decision makers, to identify mitigation measures for the activities likely to have adverse environmental and social effects, and identify the need for advanced environmental assessment.

The screening process for this project consist of four steps i) review of environmental and social impacts checklist for projects; ii) screening of impacts from the sub-components and sites; iii) assignment of environmental categories; and iv) preparation, review and approval of an Environmental Action Plan. The screening process will be carried out using a screening form to be attached to this ESMF. The already established safeguards specialist team in the implementation units will be responsible for carrying out the environmental and social screening.

Step 1 - Review of environmental and social impacts checklist for projects

The Safeguards Specialist team will make use of the environmental and social checklist annexed to this ESMF (Annex 4), will should be filled out for each of the project sub-components and by their respective teams. This activity will take place in parallel to the preparation of plans and drawings of the proposed reconstruction/rehabilitation works under each of the sub-components of Component A of the ERRP.

Category B activities may require only the application of mitigation measures indicated in the checklist. Where the checklist identifies the need for acquisition of land, a Resettlement Action Plan (RAP) should be prepared by qualified personnel in line with the OP 4.12 for Involuntary Resettlements, and taking into account the Ministry Diploma 181/2010 of November 3, and taking into account the Resettlement Policy Framework prepared in parallel to this ESMF.

If the results of the environmental and social screening process indicate the need for an environmental impact assessment (EIA) as a result of the complexity of the proposed reconstruction/rehabilitation activities, EIAs will be carried out by an authorized consultancy firm, in line with the Decree 45/2004 (and its update as per the Decree 42/2008 of November 4) on Regulations for Environmental Impact Assessment Processes administered by MITADER, and in consideration of the Bank's OP 4.01 for Environmental Impact Assessments.

This ESMF includes a simple Environmental and Social Management Plan to be used by the different implementation units of the ERRP.

Step 2 - Screening of Sites

The Safeguards Specialists Team from each of the project implementation units or sub-components should conduct a desktop study aimed at appraising the project's plans and activities. The team will be trained by the Provincial Directorate of Land, Environmental and Rural Development (DPTADER) on the identification of basic environmental and social issues associated with development projects. Each safeguards team shall work in coordination with the other members of the implementation unit (including the MOPHRH, AIAS, INIR and MINEDH/DIPLAC-CEE) to determine the likelihood of the project to cause negative environmental and social impacts. The team should conduct a site visit with a view to verify the site conditions and determine what the potential environmental and social impacts associated with the activities to be implemented.

Step 3 – Assignment of Environment Categories

The identification and attribution of a category for each sub-component should be preceded by filling out the proposed Environmental and Social Screening Form (Annex 3) and the information gathered in this form will be used to assign the appropriate environmental category A⁺, A, B or C as described below. The criteria for categorization of the proposed rehabilitation/reconstruction works under this ESMF are based on the World Bank's OP 4.01 for Environmental Assessment and the Mozambican EIA regulations as per the newly approved Decree 54/2015.

The environmental categorization of activities will be carried by the Safeguards Specialist team, under the auspices of the implementation unit and taking into consideration of the criteria below:

- **Category A⁺:** activities requiring an Environmental Impact Assessment and reports subject to independent review by experts with recognized experience;
- **Category A:** activities requiring an Environmental Impact Assessment;
- **Category B:** activities requiring an Environmental Impact Assessment (EIA) or/and an Environmental Management Plan (EMP);
- **Category C:** activities that are exempt from detailed environmental impact assessment, but which shall be implemented in observance of environmental management best practices.

The ERRP has been analyzed the project has been categorized as B. All activities under components A and D, given the nature of the foreseen works fall under Categories B and C as their potential environmental and social impacts are expected to be site-specific, minimal, and easily mitigated through a simple environmental management plan (for category B activities) and environmental management best practices for category C projects.

Each proponent of the subcomponents of the project (MOPHRH, INIR, AIAS, and MINEDH-DIPLAC-CEE) will be required to fill the environmental and social screening forms of the proposed construction/rehabilitation works, propose adequate environmental classification of the

activities, and communicate the results of the screening to MITADER at the Provincial Directorate of Environmental (DPTADER) for final decision-making.

Step 4 - Preparation, Review and Approval of Environmental Action Plan

The environmental and social screening forms and the EIA reports should be submitted to DPTADER for review and decision-making. In summary, DPTADER will be responsible for the following:

- Review of the results and recommendations submitted by the Safeguards Specialist team based on the environmental and social screening form (Annex 3);
- Review of the proposed mitigation measures presented in the Environmental Checklist (Annex 4);
- Review the results of the conducted EIAs and ESMP (included in this ESMF) to determine and ensure that all relevant environmental and social issues have been properly addressed, and relevant mitigation measures have been put in place for the proposed reconstruction and rehabilitation works.

In the case of approval of an EIA Report, an Environmental License in line with the requirements of the Decree 45/2004 on Regulations for Environmental Impact Assessment Process will be issued. The approval should also include information on how the findings of the EIA Report were used to make the final decision.

Once the environmental and social screening form has been approved by DPTADER, the district and the project implementation unit environmental officers will be informed (in writing) and the construction/rehabilitation works can begin.

Public Consultation and Disclosure

The EIA Regulations for Environmental Impact Assessment Process (Decree 54/2015) and the Ministerial Diploma 130/2006, as described in this document stipulate that public consultation is an integral part of the EIA process and should be considered throughout the project cycle, and should include all relevant bodies, the Project Affected Persons (PAPs) and interested persons. The public consultation process should include:

- One or more public (members of the community, government and non-government entities and other stakeholders) meetings with a view to present the proposed activities, and gather public views, concerns and expectations regarding the proposed project;
- Register all the issues raised and ensure that communication channels between the public and the project team are established with a view to gather public perception regarding the proposed project.

Public meetings must be preceded by a public announcement which clearly states where the meetings will be held, the date, and such notice must be publicized through the most circulated newspaper or the most used communication channel (e.g. radio, TV, newspaper) 15 days before the meeting date. In certain cases, members of the public may require basic information about the project prior to the meeting date, to allow for optimal and active participation during the public meetings.

Public consultation should contribute to the elaboration of the scoping report by identifying the key issues which should be addressed in detail during the environmental assessment of the project's activities. The results of consultations should be included into the EIA Report and it should be explicitly stated how these results have been used in the scoping report and in making the final decision of the EIA Report. For the ERRP, it is proposed that the consultation with public be carried out throughout all phases of the project cycle.

12.1 Responsibility for implementing Screening Process

Screening phase	Responsibility
Review of checklist	Safeguards Specialist team in each sub-component/ project implementation unit (MOPHRH, AIAS, INIR, MINEDH)
Site screening	Safeguards Specialist team in each sub-component/ project implementation unit (MOPHRH, AIAS, INIR, MINEDH)
Categorization	Safeguards Specialist team in each sub-component/ project implementation unit (MOPHRH, AIAS, INIR, MINEDH)
Review and Approval	MITADER/ DPTADER Technical Assessment Committee
Selection of the consultant in case of the need for a separate EIA	<p>Safeguards Specialist teams in each sub-component/ project implementation unit (MOPHRH, AIAS, INIR, MINEDH)</p> <p>The project implementation unit will draft the EIA ToRs, and prepare criteria for hiring an authorized EIA Consultant, evaluate proposed candidatures, and select the most qualified consultant and submit the selected Consultant to the specific sector.</p>
Carrying out the Environmental Impact Assessment (EIA)	Authorized EIA Consultant
Approval of environmental assessment	MITADER (DPTADER)

Public consultation and Disclosure	Safeguards Specialist team in each sub-component/ project implementation unit (MOPHRH, AIAS, INIR, MINEDH)
Environmental monitoring and follow up	Safeguards Specialist team in each sub-component/ project implementation unit (MOPHRH, AIAS, INIR, MINEDH)

13. TRAINING AND INSTITUTIONAL DEVELOPMENT CAPACITY NEEDS

This section makes recommendations for the types of training and capacity building that is required to support implementation of this ESMF. These recommendations result from lessons from other projects, a rapid assessment of the current capacity levels of the project proponents for each of the sub-components of the projects, as well as from discussions had during consultation carried out as part of the preparation of this ESMF. Training and capacity building is the key to the successful implementation of the ESMF and the overall successful implementation of the ERRP.

Effective implementation of this ESMF will require technical capacity in the human resources of implementing institutions as well as logistical facilitation. Sufficient understanding of the mechanisms for implementing the ESMF will need to be provided to the various stakeholders implementing the ERRP. This will be important to support the inter-institutional coordination team at DNGRH, the existing safeguards teams present each of the institutions responsible for implementation of the sub-components and for stakeholders at local level in their role in providing supervision, monitoring and evaluation including around environmental and social reporting on the projects activities.

13.1 Capacity to Implement and Manage the ERRP

In general, all the project implementing institutions have qualified personnel to deal with environmental and social issues, as well as dedicated safeguard teams given the relationship between the ERRP and the specific projects related to the proponents. It is however noted that the number of staff and their capacity at all levels is not sufficient to address the challenges that are imposed by the various projects being managed by them or to deal with the demands of the ERRP. The existing staff members include Safeguard teams at DNGRH, AIAS, INIR and MINEDH. Focal points are also available at provincial and district levels. It is therefore recommended that additional staff is assigned to the project and that dedicated focal points are appointed and district levels

13.2 Staffing Recommendations

To ensure that there is adequate capacity to implement and monitor the performance of this ESMF and its provisions, a number of staffing recommendations have been made for the general oversight of the ESMF as well as site specific monitoring. The proposed staffing is for the inter-institutional coordination team; environmental district focal points; and site engineers.

Inter-Institutional Coordination Team

It is recommended that a dedicated team be put in place in the DNHR to form part of the inter-institutional coordination team responsible for environmental and social safeguards management. Such expertise will have specific tasks such as:

- Preparing, together with the implementing entities, annual work plans and budgets linked to ESMPs;
- Monitoring project progress as it relates to compliance with the ESMF guidelines, resolving implementation bottlenecks, and ensuring that overall project implementation proceeds smoothly;
- Collecting, reviewing, compiling and managing information relevant to the project and accounts (i.e., environmental and social monitoring and audit reports);
- Providing general oversight, guidance and support to the specific Safeguard Teams located in DNHR, AIAS, INIR and MINEDH; ensuring harmonization in terms of monitoring and reporting and establishing single standards for the different sub-components of the project;
- Organizing and providing training sessions, including a training plan and its modules, in environmental screening and environmental management; as well as training related to pest management, land acquisition and involuntary resettlement safeguard policies for field supervision staff.

District Environmental Focal Points

It is further proposed that the project Steering Committee, in collaboration with the inter-institutional coordination team, request from MITADER, the approval for an allocation of the District Environmental Officers' time (located at the SDAE), at least 16 hours a month, for monitoring and supervision of activities related to the ERRP in selected districts. The District Environmental Officer will be responsible for:

- Providing oversight and monitoring on compliance with Mozambican environmental and social regulations;
- Providing support in the environmental screening process as well as in obtaining environmental licenses;
- Ensure that any complaints, related to environmental and social impact issues, arising from the implementation of activities are resolved in a timely manner and properly documented;

- Carry out technical site audits/monitoring and point out any non-conformity with the implementation of environmental, health and safety requirement;
- Provide monthly progress reports related to the project to MITADER.

Site Engineers

It is also proposed that the specific project implementing institution assign a site engineer for each of the sub-components and specific works to the sites during preparation and implementation of the works. The site engineer will be the first point of contact between the implementing institutions' safeguard teams and the local community, the contractors and the district authorities. The Site Engineers will be responsible for:

- Be the dedicated person on site responsible for dealing with issues that require immediate attention;
- Will be responsible for environmental and social compliance and monitoring of contractors and training will be provided to such person;
- Will liaise with SDAE/ SDPI on a regular basis to ensure compliance with environmental and social regulations;
- Will provide monthly reports to safeguard teams.

13.3 Training and Capacity Development Required

For trainings, it is recommended that a training program and/ or a Capacity Development Plan is developed for each of the implementing institutions. The training program should be designed in such a manner that it improves the effectiveness of the capacity of the local authorities in the management of environmental and social impacts during the planning, implementation and operation phases of the project in the selected districts. It is proposed that the training programme considers the following:

- Technical analysis of the screening and scoping processes of projects being proposed to take place in the districts and facilitate decision making regarding their environmental sustainability;
- Technical analysis of the environmental impact assessment reports prepared by consultants;
- Technical capacity for monitoring the implementation of the environmental management plans as well as environmental audits;
- Awareness raising of the participants on the relevance and the need for environmental management in the planning, implementation and operation of development projects;
- In-depth training in Linkages between environmental, social and natural resource management and sustainable rural livelihoods, EIA procedures, legislation, use of this ESMF, potential impacts, land acquisition and community involvement.

The staff trained at provincial/district levels should comprise all the key sectors including infrastructures and building, water and sanitation, agriculture, health, energy, education and environment.

And lastly, exchange visits and joint monitoring visits amongst officers from the project areas should be encouraged, particularly where there is evidence of good practices and success stories and where there are financial constraints for undertaken some of the recommended trainings.

14. BUDGET FOR THE PROVISION OF TECHNICAL SUPPORT IN THE PREPARATION OF SUBPROJECTS

The tables below provides an estimated budget for the preparation of the ESIA and respective EMPS, as well as monitoring, evaluation, auditing and training/capacity building that will be required specifically to be managed by the environment and social management unit. The budget has been broken down into different components and the total amounts correspond to the level of effort required to plan, implement and monitor the environmental and social safeguards, taking into consideration the severity of the potential impacts.

Table 3: Table 3: Estimated Budget for the Implementation of ESMF – Dykes and Weirs

Item	Amount in (000 USD)
Implementation of the ESMF	
Initiation of Project Implementation	45
Contracting of Service Providers and Mobilization	70
Assistance for the identification, preparation and monitoring of sub-projects	120
General Technical Assistance	200
Specific Technical Assistance	100
Monitoring	225
Inspection	50
Annual Review	35
Regular Audits	40
Training and Capacity Building	
Recruitment of EO	216
Specialized Trainings for EO	35
Inter-provincial exchange visits	25
Health, Safety and Security in the Workplace	
Health, Safety and Security in the Workplace	100

Hygiene and Sanitation	150
HIV/AIDS	200
First Aid	125
Preparation and Implementation of ESIA's and ESMPs	
Preparation and Implementation of ESIA's and ESMPs	350
Total	2,086.00

The total cost for the preparation and implementation of the ESMF as well as the ESIA/ ESMP that form part of the dykes and weirs rehabilitation is of USD **2, 086.00**.

Table 4: Estimated Budget for the Implementation of the ESMF – Mocuba Water

Item	Amount in (000 USD)
Implementation of the ESMF	
Initiation of Project Implementation	15.00
Contracting of Service Providers and Mobilization	25.00
Assistance for the identification, preparation and monitoring of sub-projects	40.00
General Technical Assistance	70.00
Specific Technical Assistance	35.00
Monitoring	75.00
Inspection	20.00
Annual Review	35.00
Regular Audits	40.00
Training and Capacity Building	
Recruitment of EO	216.00
Specialized Trainings for EOs	35.00
Inter-provincial exchange visits	25.00
Health, Safety and Security in the Workplace	
Health, Safety and Security in the Workplace	100.00
Hygiene and Sanitation	150.00
HIV/AIDS	200.00
First Aid	125.00
Preparation and Implementation of ESIA's and ESMPs	
Preparation and Implementation of ESIA's and ESMPs	350.00
Total	1,556.00

The total cost for the preparation and implementation of the ESMF as well as the ESIA/ ESMP that form part of the Mocuba Water Supply System is **USD 1,556,000.00**.

Table 5: Estimated Budget for the Implementation of the ESMF – Irrigation Scheme

Item	Amount in (000 USD)
Implementation of the ESMF	
Initiation of Project Implementation	25.00
Contracting of Service Providers and Mobilization	150.00
Assistance for the identification, preparation and monitoring of sub-projects	200.00
General Technical Assistance	210.00
Specific Technical Assistance	150.00
Monitoring	325.00
Inspection	250.00
Annual Review	75.00
Regular Audits	180.00
Training and Capacity Building	75.00
Recruitment of EO	216.00
Specialized Trainings for EOs	35.00
Inter-region exchange visits	25.00
Health, Safety and Security in the Workplace	300.00
Hygiene and Sanitation	250.00
HIV/AIDS	240.00
First Aid	225.00
Preparation and Implementation of ESIA's and ESMPs	750.00
Total	3,681.00

The total cost for the preparation and implementation of the ESMF as well as the ESIA/ ESMP that form part of the irrigation scheme is of **USD 3,681.00**.

Table 6: Estimated Budget for the Implementation of the ESMF – Schools Infrastructures

Item	Amount in (000 USD)
<i>Implementation of the ESMF</i>	
Initiation of Project Implementation	75.00
Contracting of Service Providers and Mobilization	150.00
Assistance for the identification, preparation and monitoring of sub-projects	200.00
General Technical Assistance	210.00
Specific Technical Assistance	150.00
Monitoring	325.00
Inspection	250.00
Annual Review	75.00
Regular Audits	180.00
Training and Capacity Building	75.00
Recruitment of 3 Eos (one in each province)	648.00
Specialized Trainings for EOs	105.00
Inter-region exchange visits	75.00
Health, Safety and Security in the Workplace	900.00
Hygiene and Sanitation	750.00
HIV/AIDS	720.00
First Aid	675.00
Preparation and Implementation of ESIA's and ESMPs	2,270.00
Total	7,833.00

The total cost for the preparation and implementation of the ESMF as well as the ESIA/ ESMP that form part of the education infrastructures in Nampula, Zambezia and Niassa provinces is **USD 7,833.00**.

During the implementation of the ERRP it is proposed that DNGRH manages the proposed funds and play a coordination role with regards to environmental management. While the World Bank may provide

funding for environmental management for the ERRP, it's fundamentally important for the different institutions covered by the ERRP integrate environmental management as part of their sustainability plan to ensure continual improvement of sectors' environmental management.

Table 7: Estimated budget to conduct annual inspections for all category B projects (by DPTADER)

Item	Amount in (000 USD)
Annual Inspections of the Implementation of ESMF on all project sites	
Planning for inspections/assessment of the implementation of ESMF	135
Monitoring of sites x 3	225
Inspections of sites x 3	150
Annual Review	105
Regular Audits x 3	120
Preparation of reports and submission	300
Total	915

The budget provision for the annual inspections on all category B project sites has been estimated at \$USD 915.00.

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ANNEX 1: GENERIC ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

ANNEX 1.1 DYKES AND WEIRS

The purpose of dykes and weirs are to prevent or control water from entering habitable areas, and they are very common along river banks in areas prone to flooding. Their functions are therefore to manage the levels and flow/ discharge of water, to enhance the environment and to stabilize water channels. In the project areas located, dykes and weirs play an important role given the exposure to floods in these areas. Dykes and weirs are also key in ensuring flood control and the protection of human lives, livelihoods and infrastructures invested in the surrounding areas.

The rehabilitation and reconstruction of dykes and weirs may require resettlement of people, land clearing, and the relocation of roads. Other environmental and social impacts and their respective mitigation measures are presented in the table below.

Potential adverse environmental and social impacts	Mitigation measures
Human Environment <ul style="list-style-type: none">• Loss of productive land (e.g. agriculture, grazing and forestry)• Uptake of land• Displacement of people and families• Loss of local livelihoods• Destruction of cultural and heritage sites for use of spaces	<ul style="list-style-type: none">• Consider carryout works within the limits of the original project areas and avoid expansion of areas of work;• Involve interested and affected people, directly or indirectly affected by the activities of the Project;• Compensate for taken land and structures, and resettlement;• Avoid areas of significant economic or cultural value to local people.
Human Health <ul style="list-style-type: none">• Risk of water borne illnesses such as cholera or malaria• Public nuisance and health impacts resulting from inadequate disposal of solid wastes• Increase in HIV/AIDS rates as a result of workers coming from other areas of the country	<ul style="list-style-type: none">• Distribute mosquito nets to project workers who remain on-site as well as to local communities in surrounding area of the project;• Outbreaks of malaria, urinary infections and water-borne illnesses should be monitored during and after reconstruction works;• Solid waste should be covered to avoid contamination of water.
Natural Environment <ul style="list-style-type: none">• Vegetation clearance, soil disturbances, and modification of natural habitats• Contamination of soils and water• Soil erosion	<ul style="list-style-type: none">• Reinstatement of vegetation cleared following completion of works; rehabilitation of site's disturbed soils immediately after completion of works;• Ensure that reconstruction process is managed adequately and that all stages of the

<ul style="list-style-type: none"> Poorly installed channels may concentrate water in specific areas and subsequently drain the area and contribute to drying up wetlands. 	works are monitored for quality control and quality assurance
Aquatic Environment <ul style="list-style-type: none"> Reduced or altered timing, quantity, quality and temperature of downstream water flows Altered rates and locations of bed and bank erosion and deposition downstream Reduction in quantity and quality of aquatic habitats and fish production 	<ul style="list-style-type: none"> Ensure thorough analysis and assessment of potential impacts to develop and plan, as part of the project, an acceptable combination of: water releases required to sustain habitats and fish production, habitat improvements to sustain production and fisheries, development assistance to people dependent on reduced fisheries

ANNEX 1.2 REHABILITATION OF RURAL INFRASTRUCTURE IN MAGANJA DA COSTA

The work to be carried out under this sub-component will focus on the rehabilitation of irrigation infrastructures in the Maganja da Costa District. These infrastructures will include irrigation systems, rural access roads, bridges and the electricity supply line. Reconstruction of electricity supply lines will not only benefit the irrigation systems but also the population living in the surrounding areas of the project. It will entail that more people in Mozambique will have access to electricity, better healthcare provided especially at night, and better teaching and learning conditions, where these are also taking place in the evenings as a result of electrification.

Reconstruction of rural roads and bridges will have a great impact particularly in linking rural produces with markets, especially in the commercialization of crops produced using the reconstructed irrigation schemes. Given the nature of the activities under this sub-component, a number of adverse impacts may arise if the mitigation measures are not complied with.

Potential adverse environmental and social impacts	Mitigation measures
Human Environment <ul style="list-style-type: none"> Acquisition and occupation of private land resulting in resettlement Loss of productive land Accumulation of solid waste Destruction of cultural and heritage sites Risk of accidents including road accidents and electrocution from the works related to the rehabilitation of the electric power supply line 	<ul style="list-style-type: none"> Carryout works within the limits of the original project areas and avoid expansion of areas of work; Involve interested and affected people, directly or indirectly affected by the activities of the Project; Compensate for taken land and structures, and resettlement; Avoid areas of significant economic or cultural value to local people; Delimitation and signalization of the risk areas, including awareness regarding accident risks
Human Health	

<ul style="list-style-type: none"> • Water borne illnesses such as cholera or malaria • Increase in HIV/AIDS rates • Work-related accidents • Accumulation of solid waste 	<ul style="list-style-type: none"> • Distribute mosquito nets to project workers who remain on-site as well as to local communities in surrounding area of the project; • Promote treatment of water for human consumption; • Outbreaks of malaria, urinary infections and water-borne illnesses should be monitored during and after reconstruction works; • Promote and ensure compliance with health, safety and hygiene management plan; • Solid waste should be covered to avoid contamination of water
Natural Environment <ul style="list-style-type: none"> • Loss in vegetation and natural habitats of plants and animals • Soil erosion • Soil compaction • Contamination of water and soils 	<ul style="list-style-type: none"> • Reinstatement of vegetation cleared following completion of works; rehabilitation of site's disturbed soils immediately after completion of works; • Ensure that reconstruction process is managed adequately and that all stages of the works are monitored for quality control and quality assurance
Aquatic Environment <ul style="list-style-type: none"> • Contamination of rivers/ streams 	<ul style="list-style-type: none"> • Ensure thorough analysis and assessment of potential impacts to develop and plan, as part of the project, an acceptable combination of: water releases required to sustain habitats and fish production, habitat improvements to sustain production and fisheries, development assistance to people dependent on reduced fisheries.

ANNEX 1.3 REHABILITATION OF MOCUBA WATER SUPPLY SYSTEM

The rehabilitation of the Mocuba drinking water supply system will focus on minimum investments and temporary repairs, and at the same time a detailed study to determine a longer-term and more resilience and sustainable reconstruction or replacement of the system will be conducted. It is expected that more people will have access to safe water in the Mocuba district, particularly girls and women can spend time undertaking other activities and going to school instead of walking long distances in search of water. It is also expected that there is a reduction in water-borne illnesses and water contamination due to safe supply of water in the target area.

Not major adverse environmental and social impacts are expected to result from this sub-component as the works envisaged are of small-scale and localized. The works will also be carried out in the existing infrastructure location.

Potential adverse environmental and social impacts	Mitigation measures
Human Environment <ul style="list-style-type: none"> • Accumulation of solid waste • Noise pollution • Dust 	<ul style="list-style-type: none"> • Solid waste should be separated, recycled and covered to avoid contamination of water and soils • Watering surfaces to reduce dust and reduce usage of chemicals
Human Health <ul style="list-style-type: none"> • Water borne illnesses such as cholera, diarrhea or malaria • Increase in HIV/AIDS rates • Work-related accidents • Accumulation of solid waste • Water shortages in some areas during the rehabilitation or emergency repairs works 	<ul style="list-style-type: none"> • Ensure water quality is adequate for human consumption (quality of water should be tested for salinity, and to determine necessary water treatment Outbreaks of malaria, urinary infections and water-borne illnesses should be monitored during and after reconstruction works; • Promote and ensure compliance with health, safety and hygiene management plan; • Solid waste should be covered to avoid contamination of water; • Establish alternative water sources during rehabilitation works; • Ensure local communities are informed of possible water shortages prior to and during works
Natural Environment <ul style="list-style-type: none"> • Soil erosion • Soil compaction • Contamination of water and soils 	<ul style="list-style-type: none"> • Reinstatement of vegetation cleared following completion of works; rehabilitation of site's disturbed soils immediately after completion of works; • Avoid reconstruction works and work site waste disposals close to waterways to ensure the protection of water resources • Use of chemical products such as oils, lubricants and fuels should be limited and controlled/ supervised; • Drainage systems in the Project sites should be equipped with a water/ oil separator.

ANNEX: 1.4 REHABILITATION AND CONSTRUCTION OF RESILIENCE SCHOOLS

This sub-component will focus on rehabilitating and constructing climate resilience schools, including: (a) rehabilitating conventional classrooms; and (b) constructing mixed-material classrooms. Given the high exposure and vulnerability to floods, storms, and earthquakes, the rehabilitation of these infrastructures should be undertaken using a multi-risk assessment

approach, in that the necessary quality is employed in the design and quality of the works to ensure that the infrastructures can bear these risks associated to natural disaster.

Potential adverse environmental and social impacts	Mitigation measures
Human Environment <ul style="list-style-type: none"> • Social conflict as a result of acquisition or uptake of private land • Involuntary resettlement • Destruction of cultural heritage sites • Accumulation of solid waste • Disruption in school classes 	<ul style="list-style-type: none"> • Solid waste should be separated, recycled and covered to avoid contamination of water and soils; • Watering surfaces to reduce dust and reduce usage of chemicals; • Delimitation and signalization of the risk areas including awareness regarding accident risks; • Choosing less noisy equipment and make use of equipment in good conditions.
Human Health <ul style="list-style-type: none"> • Water borne illnesses such as cholera, diarrhea or malaria • Increase in HIV/AIDS rates • Work-related accidents • Accumulation of solid waste • Water shortages in some areas during the rehabilitation or emergency repairs works 	<ul style="list-style-type: none"> • Ensure water quality is adequate for human consumption (quality of water should be tested for salinity, and to determine necessary water treatment Outbreaks of malaria, urinary infections and water-borne illnesses should be monitored during and after reconstruction works; • Promote and ensure compliance with health, safety and hygiene management plan; • Solid waste should be covered to avoid contamination of water; • Establish alternative water sources during rehabilitation works; • Ensure local communities are informed of possible water shortages prior to and during works
Natural Environment <ul style="list-style-type: none"> • Soil erosion • Soil compaction • Contamination of water and soils 	<ul style="list-style-type: none"> • Reinstatement of vegetation cleared following completion of works; rehabilitation of site's disturbed soils immediately after completion of works; • Avoid reconstruction works and work site waste disposals close to waterways to ensure the protection of water resources • Use of chemical products such as oils, lubricants and fuels should be limited and controlled/ supervised • Drainage systems in the Project sites should be equipped with a water/ oil separator

ANNEX 2: Minutes of public meetings – Nampula Province



REPUBLIC OF MOZAMBIQUE

MINISTRY OF PUBLIC WORKS, HOUSING AND WATER RESOURCES

National Directorate of Water Resources Management

**MINUTES OF PUBLIC CONSULTATION MEETING ON THE EMERGENCY
RESILIENCE RECOVERY PROJECT (ERRP) FOR THE NAMPULA PROVINCE
COVERING EDUCATION INFRASTRUCTURES**

FIRST PUBLIC CONSULTATION MEETING

**UNDER THE ENVIRONMENT AND SOCIAL MANAGEMENT FRAMEWORK
(ESMF) AND RESETTLEMENT POLICY FRAMEWORK**

Nampula, 9th of November 2016

A public consultation meeting was held on the 9th of November 2016 in line with the Decree 130/2006 (of July 19) stipulating the general guidelines of the public participation process in the Environmental Impact Assessment process in the City of Nampula, at Executive Hotel, Pemba Room. The objectives of the public consultation meeting were:

- (i) To provide information to project beneficiaries, local communities as well as civil society organizations and government entities;
- (ii) To provide information on the potential negative impacts or consequences of the project in both the natural and socioeconomic environment; and
- (iii) To capture and collate input from stakeholders about their concerns regarding the project. .

The meeting was facilitated by the main consultant, Mr. Eduardo Macuácuá, and was attended by representatives of different sectors of Government, the Private Sector and NGOs. See attached attendance register with a list of people who attended the meeting. A point worth noting is that some of the participants in the meeting included representatives of the Education, Youth and Technology Services from 13 Districts of Nampula Province. These are mainly districts sensitive to the impacts of climate change (floods, cyclones, erosion, etc.).

Three representatives of the National Directorate of Water Resources Management [namely Lily Nombora (Senior Advisor and ERRP Focal Point), Luísa Vanessa Teixeira Lopes (Environmental and Social Safeguards Specialist) and Pedro Fernandes (Senior Advisor) as representatives of the coordinating entity of the emergency resilience recovery projects.

The meeting started at 10 o'clock local time with the Consultant welcoming all to the meeting and briefly highlighting the objectives of the public consultation exercise. All participants were asked to introduce themselves (i.e. name and organization represented).

The Consultant welcomed acknowledged the presence of participants who are from areas covered by the ERRO projects. Mr Macuacua proceeded to present basic information prepared for the Nampula Province. Among other things, the presentation highlighted the following:

- Following natural disasters that affected the central and northern regions of the country between the years 2014 and 2015, the government of Mozambique requested and obtained a loan from the World Bank to implement emergency recovery programs to repair infrastructure and facilities damaged during the natural disasters;
- The infrastructure that was damaged included facilities for education, irrigation systems, etc.;
- Several institutions are responsible for the implementation of the Emergency Resilience Recovery Project, namely the National Directorate of Water Resources Management (DNGRH) as the coordinating institution, the Ministry of Education and Human

Development (MINEDH), the National Irrigation Institute (INIR), as well as the Water and Sanitation Infrastructure Administration (AIAS);

- It was emphasized that although the Emergency Resilience Recovery Projects in the Nampula Provinces focused on infrastructure in the education sector, the projects could in future be expected to address other sectors affected by the emergency natural events.
- The successful implementation of these projects is informed by a suitable Environmental and Social Management Framework (ESMF), as well as a Resettlement Policy Framework (RPF). These instruments assist in identifying the potential environmental and social impacts associated with the implementation of ERRP;
- One of the objectives of the public consultation process was to share lessons with participants about potential social and environmental impacts that have already been identified by the Consultant and to solicit input from participants about other environmental and social impacts associated with the proposed activities with a view to improving information on mitigation measures to be included in the project;
- Mr. Macuácuá invited participants to offer comments and suggestions which would assist with the identification of other impacts that could result from the implementation of ERRP. These potential impacts are to be considered in the preparation of the ESMF to inform recommendations that are made for the management of environmental and social impacts as well as management of involuntary resettlements.

The types of inputs and comments raised by the participants included the following:

Name of participant	Comments raised
Mr. Mussá António Peixoto, the Coordinator of Special Programs and Focal Point for Emergency and Health at SDEJT of Nacala Porto	<p>After acknowledging the very succinct and clear presentation, Mr. Peixoto noted that the Labor Law indicated in the shared documents (Law No. 8/98) was revoked by another Law no. 23/2007, which is now in force.</p> <p>In urban areas such as the Nacala Port, the Education Sector faces enormous challenges in obtaining physical spaces for the resettlement of schools affected by climate change. As this always implies the need for payment of a compensation fee given the lack of space as it is not appropriate to transfer schools away from the communities they serve;</p> <ul style="list-style-type: none"> • The lack of schools makes it very easy for Education to lose its physical space even though schools had access to land. An example given was that of EPC of Mucuaípa that lost its space to the Ferrodiario de Nacala Club due

	to erosion caused by the lack of suitable drainage systems.
Mr. Amade Marques, from SDEJT of the Monapo District	<p>There are challenges in the education sector regarding intra and inter-institutional communication.</p> <p>When a climatic change event occurs and leads to the destruction of infrastructure, the district management immediately informs the provincial directorate, which is not always in a position to respond. There are situations where information on the destruction of school is shared with education management team.</p> <ul style="list-style-type: none"> • There are schools that experience cyclones on multiple occasions and have not yet been transferred because some leaders do not agree to this. It was mentioned that the wind comes only to destroy the school rooms in the village (and not community houses). • A secondary school of Monapo headquarters was built by the local community with support from the Catholic Church and did not obey the resilience standards in terms of location (it is located near a river). No soil analysis was done and there was no building permit. The quality of the work is poor. It is possible that the school may disappear because of the effects of climate change and erosion and should be relocated elsewhere.
Mr. Rui Abílio, from the SDEJT of Moma District	<ul style="list-style-type: none"> • The EPC of Meluco is on the list of schools that regularly suffer from weather events, including those of 2014-2015 that left children without classrooms. Children study in the open and the situation was minimized with support from the Education Special Programs Unit at the provincial level that provided us with two tents. • He called for a greater coordination between district services of Education, Youth and Technology with the provincial education directorate.

	<ul style="list-style-type: none"> • At the level of Mugovolas District and almost in many other districts of Nampula, the majority of schools are built with precarious and / or mixed material (walls made of local material and roof made of zinc sheet) which led him to suggest the creation of local capacities for the production of burnt brick that could increase the resilience of classrooms in the province. • He highlighted that many districts have clay and firewood in abundance that could be used in brick production and building robust classrooms but this requires community participation through School Boards. • "We have to come to the end of external support which very frequently delay the attainment of results", he concluded.
<p>Mr. Diamantino Bento João, from the SDEJT of Mossuril District, made his contributions in the following terms:</p>	<ul style="list-style-type: none"> • He noted that the majority of schools have been built with local materials without the use of recommended building standards meaning that many schools cannot withstand the effects of climatic events (flood, erosion and gale) with the result that classrooms ought to regularly be rebuilt; • He recommended the training of local artisans on resilience construction techniques. When there is a need to rebuild or recover classrooms, the Provincial Directorate offers support, sending the necessary materials such as zinc plates, nails, etc. and it is up to each school to seek a local craftsman, often without adequate knowledge, which affects the quality of the classrooms built; • It drew attention to the need for resettlement of schools from climate-prone areas to safe areas, recommending that this could not mean changing the location of schools as it could adversely affect children who due to distances may even give up going to school. One should always seek to resettle schools in safe areas, but in the same area, neighborhood or locality. The example of the

	<p>Nacala Porto School referred by Mr. Mussá cannot be resettled in the expansion zone, for instance, which is 6-8 km away. As a matter of fact, there are other schools in the expansion zone.</p> <ul style="list-style-type: none"> • Finally, he commented that the classes do not stop because of the destruction of classrooms, they do have alternatives to continue running classes (i.e. The use of private rooms).
Mr. Alfredo Felismino, from SDEJT of the new District of Liupo, stated that:	<ul style="list-style-type: none"> • Liupo District is very vulnerable to cyclones and other weather events, with about 50% of classrooms having collapsed due to the events of 2014-2015. However, there was an effort to rebuild the classrooms with the participation of local communities. • He noted the contribution of local communities with Pau-Ferro used to renovate the classrooms but regretted that these stakes, although hard, were often chewed by ants, making them fragile and jeopardizing the safety when climate change induced events occur. • He regarded the construction using conventional construction materials as of low quality which makes the roofs very prone to climate changes. The quality of zinc sheet supplied by the contractors is of very low quality. He drew attention to the need for raising the quality of the works and mentioned schools which are less than 7 years old (e.g. EPC of Mialo, Coroma School, etc.) already showing signs of destruction by natural disasters. • He recommended that in addition to transferring schools to safer places, it is necessary to plant trees to contain or reduce wind speeds. • He lamented the fact that ASNANI had come to 4-5 schools with no notice among local authorities to build 12 improved latrines. We came to know about these in reports submitted to the provincial government even though there were no latrines in those schools. • The transfer of schools from a high-risk zone to safe areas (i.e. such as the Tinga school, located

	<p>3km off the coast in a plateau that is exposed to windfalls)requires huge investments;</p> <ul style="list-style-type: none"> • The proposed suggestion of brick production for use in the construction of safer rooms will require large quantities of firewood and we have to think about where we are going to get the firewood, as well as the associated environmental impacts.
Ms. Aldina José Cipriano Sinalo, from the SDEJT of Ilha de Moçambique District	<ul style="list-style-type: none"> • The secondary school of <i>Ilha de Moçambique</i> was rehabilitated quite recently in 2004, but currently (2015/2016) it has suffered from a constant fire due to serious problems in the electrical system (where there are often short-circuits that end in a fire. A case of poor quality of work).
Mr. Leovigildo Zacarias Conho, technician at the Provincial Directorate of Education and Human Development, in Nampula,	<ul style="list-style-type: none"> • With regard to the construction of classrooms in the province of Nampula, he lamented the fact that some members of the community could come to the sites identified for school building and place their own private infrastructure so that they later on are entitled to compensations payment; • On the other hand, whenever work of education ends, high rates of HIV-AIDS infection are reported. He recommended that under the ERRP, HIV-AIDS awareness should be undertaken to reduce the risks of the spread of sexually transmitted diseases.
Mr. João Luís João, also from the Provincial Directorate of Education and Human Development in Nampula.	<ul style="list-style-type: none"> • The downfall of a roof at Monapo Secondary School was in a new added-block in a building that already existed, and the expansion works was of poor quality, which led to INGC questioning how only the new block had collapsed and the old block had not. • Erosion has destroyed many classrooms and schools, and therefore it should merit high attention in the ERRP implementation. • The need for effective communication among stakeholders from the district educational services to the provincial directorate and the public administration in general.
Mr. Agostinho Vasco, also a technician at the Provincial	<ul style="list-style-type: none"> • In 2010 the Nampula Governor, in response to requests for support by the local community for

<p>Directorate of Education and Human Development</p>	<p>additional classrooms, launched a pilot project in which teams from community members were selected to be taught how to produce bricks that could be disseminated back to the communities. A 10-day course was administered to the teams and they were provided with subsidies, accommodation and food as they were away from home. After the training the government supported the communities with zinc sheets, nails and other materials to produce bricks. Instead of producing bricks they demanded a pay as they were paid approximately 9,000 MZN during the training. The result was that resources were spent in vain and the trainees did not produce bricks without receiving payment. Based on this experience, Mr. Agostinho recommended that the SDEJT officers should not be directly involved in the mobilization of voluntary workers from communities to build classrooms. He recommended that this task be left to the existing School Councils led by community members.</p> <ul style="list-style-type: none"> • Despite the poor quality of construction in Nampula Province, there is a gradual improvement in the quality of education infrastructure owing to the accelerated classroom construction program launched in 2005, notwithstanding the difficulties the program also went through. From 2011 onward there has been a significant leap in the quality of classrooms that have been built. • Such improvement may have been due to the existing technical drawings for each zone (whether high, medium or low risk) which includes the type of and the way of placement of the construction materials which has helped improve the quality of the works. •
<p>Mr. Agostinho Aúba, Technician of Special Programs at PDEHD</p>	<p>There are various factors affecting the quality of education services as following:</p> <ul style="list-style-type: none"> • Population growth;

	<ul style="list-style-type: none"> • Rural exodus; • Lack of coordination between sectors; • Lacking Monitoring and Evaluation Systems • Policies failure
Mr. Marcelino Ibraimo Muqueper, a technician at SDEJT of Memba District	<ul style="list-style-type: none"> • Memba District is vulnerable to frequent wind-type events, with a number of schools which have been affected. The affected schools include: (EPC of Geba, Namatapa, Namahaca, Alto Nacala and Smuco, EP1 of Nthutho, Napai, and Nacuphi). To address this problem, a team has been set up at the level of the Memba District to coordinate the procurement and supply of construction materials for classrooms. • One of the current challenges in the education sector in Memba was the land conflicts between local communities and the school management. Often communities evade the physical space of the school, leaving it confined without space for its expansion.
Mr. Miguel Maganha Domingos, technician from SDEJT of Angoche District	<ul style="list-style-type: none"> • A monitoring and supervision guide for education infrastructure to be produced and shared with all key stakeholders. • In many schools pedestrians could cross the school grounds in the middle and that contributes to the degradation of education infrastructures and erosion. • School spaces should be delimited and if possible fenced.
Mr. Momade Abacar, a technician from the SDEJT of Mongincual District, said that:	<ul style="list-style-type: none"> • Mongicual District is vulnerable to the strong winds and floods that have affected education infrastructure. Despite local efforts to rebuild the classrooms, the phenomenon repeats every year. • Transferring schools without resettling the beneficiaries of the schools (the local population) may not have the desired effect and even could harm the children; • Finally he presented the list of schools that suffered the effects of climate change induced events in that District, namely EPC of Namalungo, B and

	Nacabaia and EP1 of Namilapa, Mutepo, Mucupe, Namiepe, Nathonthé, Nanhupo and Mecoia, etc.)
Antoninho Estevão, a PDEHD technician from Nampula.	<ul style="list-style-type: none"> • The rehabilitation of this infrastructure required huge sums of money from the State Coffers and, unfortunately, the contractor was not even made aware of the defects of the work and the consequences thereof. • This specific school is not part of ERRP given that at the time of the survey the district leadership did not enroll it.
Mr. Nomésio Mauro Fernando, SDEJT technician from the new District of Larde, stated that:	<ul style="list-style-type: none"> • In Larde District about 95% of schools were affected by the climatic disasters. However the most serious cases were EPC of Natheré, Nambilane and Najaca B and EP1 of Naheco and of Namichir.
Mr Amade Marques, from the SDEJT of Monapo District, spoke for the second time to emphasize that:	<ul style="list-style-type: none"> • Most classrooms are made on local material and when support is requested from DPEDH in terms of zinc sheets, they send IBR zinc sheets that are quite heavy and which leads either to misuse of application or it triggers the collapse of the building due to the weight of zinc sheets.
<ul style="list-style-type: none"> • Mr. Pedro Fernandes from the National Directorate of Water Resources Management (DNGRH), said to: 	<ul style="list-style-type: none"> • Mr. Fernandes has been impressed with the level of participation, and mentioned that there were many interventions related to aspects that touch the daily lives e of education professionals. • He added that a number of problems were raised, but these should be addressed as challenges from erosion, the quality of works and the process of project implementation, etc. • On behalf of NDWRM he assured the participants that all contributions have been taken and that the Consultant will use them in enriching the document on the framework of environmental and social management policies. • He expressed concern about the case presented that touch ASNANI, as well as the situation of the Secondary School of Ilha de Mocambique, whose

	<p>rehabilitation involved large sums of money from the State.</p> <ul style="list-style-type: none"> • He was also worried about the quality of the works and took advantage of the presence of some contractors in the room to draw attention to the need for selection of quality building materials and the observance of the quantity specifications map. • He thanked all the participants and asked the consultant to share with the audience the next steps.
Ms. Lily Nombora from the NDWRM	<ul style="list-style-type: none"> • She acknowledged the presence and participation of different sectors in the debates during the Public Consultation Meeting; • She added that although there was a slight deviation from the main objectives of the meeting which was to collect contributions on the potential environmental and social impacts of ERRP, it was satisfactory that the discussion level was kept high; • Finally, she recommended the participants that the Consultant should share his contacts (telephone and electronic) so that the interactions can continue and contributions can be made on possible environmental and social impacts. • She also ended her speech by thanking all the participants.
The Consultant	<ul style="list-style-type: none"> • The Consultant indicated that the discussion was not over and that there are spaces for continuing with interactions through social networks and other means of on the ESMF and RPF. • When the draft document is ready, it will be shared with different relevant institutions and stakeholders including the Ministry of Education and Human Development for comments. • The Consultant thanked the participants and wished them a good return for those who came from the Districts and all were invited for snack and those who come from the districts were invited to arrange logistical issues.

Photo records during the meeting



Photo 1

Potential Impacts Extracted from the Discussions during the Public Consultation Meeting

Nr.	Identified Impacts	Safeguards Measures
1	Definitive acquisition of land for resettlement of schools in areas at risk of natural disasters;	The ESMF is called upon here to take responsibility for the resettlement and payment of compensation to the PAPs.
2	Conflicts of land resulting from the lack of fencing of school spaces;	The school spaces should be delimited and fenced;
3	Erosion which affect educational infrastructures - a pavilion in the EPC of Mucuaipa collapsed due to erosion and the school has no way of recovering it.	The ESMF should take into account the erosion phenomenon - it is recommended to create drainage ditches and channels for the passage of water.
4	<p>The extraction of local materials such as clay, firewood and poles has negative side effects on the environment;</p> <p>There are however positive impacts that may be associated with the training of local communities in brick production techniques that can be used for other purposes and thus translate into employment and income.</p>	The ESMF shall recommend measures to mitigate the negative effects;
5	The resettlement of schools into safe areas can discourage teaching and learning activities, with children giving up because of distances	Reasonable distances shall be established for the movement of school from one place to another.

6	The low quality of the materials used in the construction (e.g. zinc sheets) are of low quality putting at risk many infrastructures. Also the weight of the zinc sheets is incompatible with the structure of the walls and may take it to collapsing.	Definition of minimum standards for materials used in resilience classroom construction and specifications
7	Poor quality of electrical systems can lead to burning of classrooms (e.g., Ilha de Moçambique Secondary School), with effects on classroom disruption and loss of school desks.	The ESMF should provide fire provision safeguards;
8	Appeal of opportunists in the project areas claiming the payment of compensation;	The RPF should highlight the need and importance of the establishment of Cut-Off-Date and its dissemination in the communities and even placement of a plaque in the project area preventing the occupation of the space reserved for the school;
9	In infrastructure construction projects, there are risks of contamination with HIV / AIDS and other sexually transmitted diseases due to the presence of strangers in the area and the movement of money among workers.	Provision for civic education and provision of condoms;
10	Volunteer work from communities, usually used in classroom construction, generates conflicts in the sense that they always want to be paid.	Classroom recovery work should be associated with emergency support, i.e. provide support to men and women involved in classroom recovery. The Coordination with INGC and other NGOs working on emergency should be a priority.

11	Local materials used in construction are gnawed and fragile by pests	Safeguard on Pest Control needed! In addition local communities to be empowered on treatment and protection of building materials

ANNEX 3: Minutes of public meetings – Niassa Province



REPUBLIC OF MOZAMBIQUE

MINISTRY OF PUBLIC WORKS, HOUSING AND WATER RESOURCES

National Directorate of Water Resources Management

**MINUTES OF PUBLIC CONSULTATION MEETING ON THE EMERGENCY
RESILIENCE RECOVERY PROJECT (ERRP) FOR THE NIASA PROVINCE
COVERING EDUCATION INFRASTRUCTURES**

FIRST PUBLIC CONSULTATION MEETING

**UNDER THE ENVIRONMENT AND SOCIAL MANAGEMENT FRAMEWORK
(ESMF) AND RESETTLEMENT POLICY FRAMEWORK**

Lichinga, 11 November 2016

A public consultation meeting was held on the 11th of November 2016 in line with the Decree number 130/2006 (of July 19) stipulating the general guidelines of the public participation process in the Environmental Impact Assessment process in Residential 2 + 1 Room in the City Of Lichiga. The objectives of the public were:

- (iv) To provide information to project beneficiaries, local communities as well as civil society organizations and government entities;
- (v) To provide information on the potential negative impacts or consequences of the project in both the natural and socioeconomic environment; and
- (vi) To capture and collate input from stakeholders about their concerns regarding the project. .

The meeting was facilitated by Mr. Eduardo Macuácuá (i.e. the Consultant), and was attended by representatives of different sectors of Government, the Private Sector, as well as Non-Governmental Organizations (NGOs). See attached attendance register for a list of stakeholders who attended the meeting.

The main participants in the meeting included the following:

- Two representatives of the National Directorate of Water Resources Management (namely Luísa Vanessa Teixeira Lopes, who is a specialist in Environmental and Social Safeguards, and Pedro Fernandes , who is a Senior Advisor), participated in the public consultation meeting as representatives of the coordinating entity of the Emergency Resilience Recovery Projects.

The meeting started at 10 o'clock local time with the Consultant welcoming all to the meeting and briefly highlighting the objectives of the public consultation exercise. All participants were asked to introduce themselves (i.e. name and organization represented).

The Consultant welcomed acknowledged the presence of participants who had travelled from afar to be part of the meeting. Mr Macuacua proceeded to present basic information about the project which had already been shared with the participants about the public consultation meeting at Niassa Province. Among other things, the presentation highlighted the following:

- Following natural disasters that affected the central and northern regions of the country between the years 2014 and 2015, the government o Mozambique requested and obtained a loan from the World Bank to implement emergency recovery programs to repair infrastructure and facilities damaged during the natural disasters;
- The infrastructure that was damaged included facilities for education, irrigation systems, etc.;
- Several institutions are responsible for the implementation of the Emergency Resilience Recovery Project, namely the National Directorate of Water Resources Management

(DNGRH) as the coordinating institution, the Ministry of Education and Human Development (MINEDH), the National Irrigation Institute (INIR), as well as the Water and Sanitation Infrastructure Administration (AIAS);

- It was emphasized that although the Emergency Resilience Recovery Projects in the Niassa and Nampula Provinces focused on infrastructure in the education sector, the projects could in future be expected to address other sectors affected by the emergency natural events;
- The successful implementation of these projects is informed by a suitable Environmental and Social Management Framework (ESMF), as well as a Resettlement Policy Framework (RPF). These instruments assist in identifying the potential environmental and social impacts associated with the implementation of ERRP;
- One of the objectives of the public consultation process was to share lessons with participants about potential social and environmental impacts that have already been identified by the Consultant and to solicit input from participants about other environmental and social impacts associated with the proposed activities with a view to improving information on mitigation measures to be included in the project;
- Mr. Macuácuá invited participants to offer comments and suggestions which would assist with the identification of other impacts that could result from the implementation of ERRP. These potential impacts are to be considered in the preparation of the ESMF to inform recommendations that are made for the management of environmental and social impacts as well as management of involuntary resettlements.

The types of inputs and comments raised by the participants included the following:

Name of participant	Comments raised
Mr. José Manuel Gaisse, Chairman of the Niassa Business Council, with specific business interests in the construction area	<ul style="list-style-type: none"> • After welcoming the Government's efforts in drawing up such a project, Mr Gaisse argued that these types of initiatives should not be limited to consultancy studies only; • He gave an example of education projects implemented four years ago where there was a total mismatch between the client and the contractor in the environmental component. The RPF documents did not allocate sufficient budget for environmental issues. Under these types of conditions, it is difficult for the contractor to comply with any environmental and social impact management plan without budget; • It is rare for projects in Niassa Province, to make provision for the payment of compensation to

	<p>communities affected by projects (PAPs); Communities know from TV and radio of projects implemented in the south of Mozambique where communities affected by projects are entitled to fair compensation when affected by projects. The local communities in Niassa Province always lose/are harmed by projects because as there is no compensation and the Government always argues that there is no money for compensation;</p> <ul style="list-style-type: none"> • It is common for communities to lose their land as the public consultation processes that the law requires are not done adequately (i.e. you find cases of community leaders (regulo) being summoned to attend meetings and they go there by bicycle and end up signing documents that award land rights to projects, often without proper consultations or the payment of compensation to the affected communities); • The failure to incorporate environmental and social issues into projects comes about as a result of exclusion of such issues in the RPF documents for the (caderno de encargos) in addition to the lack of proper supervision; • The poor quality of buildings is evident in the BCI building that soon after completion started showing cracks while buildings constructed during colonial times are still standing and in good condition. • Contractors often do not attend public consultation meetings and are this not properly sensitized of the environmental and social issues.
Mr Sidónio Johane, on behalf of the National Road Administration.	<ul style="list-style-type: none"> • Mr Johane asked the Consultant to explain the meaning of the term Resilience, as it appeared several times in the consultation documents. • The explanation offered is that resilience referred the ability of infrastructure to be robust to withstand negative effects associated with environmental hazards such as Climate Change. • Mr Johane argued that in order for infrastructure to be resilient, the design of the buildings as well as the

	<p>types of materials that are considered is very important.</p> <ul style="list-style-type: none"> • He argued that plans for many schools in Maputo do not consider the prevailing local conditions (i.e. such as soils and climate). • It is also common that alternative materials to those specified in the RPF documents are used leading to a compromise in quality standards. • In conclusion, even in cases where well-crafted RPF document may be in place, a lack of proper supervision may be a problem that affects the resilience of our infrastructures.
Mr. Victorino António Pinivo, from the National Public Salvation Services, Niassa Province	<ul style="list-style-type: none"> • The poor quality of our infrastructures is related to the poor engineering design and inspections (the engineering supervisor should take responsibility of ensuring that the right mixtures of cement with stone and sand is met so as to guarantee robust infrastructures.) • Resettlements are in many cases doomed to fail because the resettlement sites are problematic and not suitable for human habitation. As result, many families tend to abandon the resettlement sites and return to their areas of origin and this in turn causes land conflicts.
Domingos Mirione - District Secretary of Ngauma	<ul style="list-style-type: none"> • Mr Mirione queried whether the ESMF and the RPF are a new approach different from what the Government had been following in its project implementation processes. • It was clarified that this ESMF and the RPF are specific and for the ERRP project which will follow existing procedures and guidelines developed by the World Bank as the funding agency, and those of Mozambican Government as the recipient of the funding/loan. • Mr Mirione raised the matter of a contractor who abandoned work on a project supposedly because the contracting agency had not paid them. This was cited as a potential source of low quality work on the infrastructure projects.

<p>Mr. Geraldo Artur Lucas, General Director of USA Global Consultoria Lda.</p>	<ul style="list-style-type: none"> • The greatest failure is always in the implementation of the projects. Mr. Artur Lucas's company was once contracted to prepare a Plan of Structure for the District of Marupa to address erosion problems that affected the village. The project was not successfully implemented because recommendations from the Structure Plan were not followed. • In many projects there is lack of Baseline Studies which should provide information that is important for the successful implementation of projects. • School projects that the Ministry of Education and Human Development (MEHD) has designed for the coastal areas are not suitable for the inland areas such as many districts of Niassa. For example, the recommended frame for windows and doors in the south zone is made by Chafuta but in Niassa it should be made by Umbila as there is plenty of Umbila across Niassa districts. • The other example is a school built in Sanjica with a 30-cm balcony, whereas in other areas flange of 30 cm is not applicable. • Mr. Artur Lucas recommended that public consultation sessions should take place at local level where the projects take place as it is in such types of places that basic information about the interests of the communities, the availability of labor and their capacities / qualifications is obtained. • The issue of hiring local labor is not always feasible because the contractor has his own plan which must be implemented taking into account factors such as deadlines, which are often not incompatible with the plans of local communities. As an example, whenever it rains the local community members would abandon work to go for farming. • Commenting on the BCI building, he suspects there was a lack of a baseline study that would provide information on the soils and climate of the area that would inform the technical conditions and quality work.
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	<ul style="list-style-type: none"> • He concluded that the baseline studies are very important and should be recommended to all stakeholders who implement projects. Citing the example of Chókwe and basing it on the images that were displayed during the presentation by the Consultant, he argued that basic studies which could indicate the levels of the floods were lacking. Even though these baseline studies may be out of date given climate change effects, they are always needed. The example is the Niamba Amaramba Lake that four years ago could not be crossed but now, due to climate changes (droughts), it is possible to cross the lake on foot.
Mr. Emílio José Chacaia, from the Provincial Directorate of Land, Environment and Rural Development.	<ul style="list-style-type: none"> • Citing the example of education, Mt Chacaia indicated that all classrooms do not have gutters and could not withstand the effects of cyclones and high winds. • Climate Change should get society to reflect beyond the phenomena already experienced in the Niassa our region (cyclones, floods and droughts). He gave an of earthquakes and typhoons happening in other regions which are much more serious and. The country needs to build robust infrastructure to prepare against future climatic event. • The devastation of forests and the lending chambers results from the harvesting of construction materials (wood and sand).
Mr. José Gaisse Chairman of the Niassa Business Council, with specific business interests in the construction area	<ul style="list-style-type: none"> • Citing an example of ANE's contracts for road construction/rehabilitation, he argued that the directives are clearly stated in the tender documents about how many local workers are to be hired, and of these how many must be women. The HIV-AIDS education component is also provided in the RPF with specific budget. • What often happens in Education projects, is that promoters are concerned only with the technical part about the list of quantities and specifications of the materials to be used and do not consider to environmental or social aspects.

	<ul style="list-style-type: none"> • He also mentioned that alongside schools affected by natural events, there are residences made from local materials which are resistant to weather phenomena. The schools are built without considering the types of soils or the direction of the winds when positioning buildings. • There is no consideration of environmental and social issues. Our understanding is that the proponent of the infrastructure should pay compensation in case properties are affected. It is not the contractor's duty/responsibility to pay compensation. • Many times, contractor are accused of applying substandard materials. It must be borne in mind that contractor are not the producers of many of the materials that they use. In Mozambique, there is no testing of materials in laboratories and no one knows the level of adhesion of the cement we use or the quality of the sheet to cover and the quality of the inert materials and the resistance of the iron that is on sale in the local market. The contractor follows only the specifications / instructions in the RPF document. At Niassa level there are no public laboratories. The only one with a laboratory in Niassa is ANE and many people are not even aware. The cement that is used by contractors is not certified and if the work shows cracks or collapses, the fault will always be deemed to be that of the contractor.
Ms Juliana Wandu of the Community Schools Program at Diocese of Lichinga (HDPE) commented as follows:	<ul style="list-style-type: none"> • Schools built during colonial times still exist and are firm, suggesting poor quality of the schools built these days. • The Community Schools built by the communities themselves have a much higher quality than those built by contractors. She shared the bitter experience of one contractor who was imposed by a donor and who went on to abandon the work before completion! This contractor abandoned the building in the half way after being paid 100% of the project fee.

	<ul style="list-style-type: none"> • It is important to have an engineering supervisor to oversee the quality of materials and percentages of cement mixes used in the project. • The quality of schools is very poor and there are calamities experienced as there are many schools without roofs especially in the District of Cuamba, where the rooms are covered after natural disasters and come undone after a short spell of time.
Mr. Tomás Inácio Munhazana, from the Institute of Meteorology.	<ul style="list-style-type: none"> • Mr Mushazana sought to know whether the credit approved for the ERRP covered only education projects at Niassa. • Clarification was provided that this was indeed the case and was based on what was affected during the disasters of 2014-2015. Mr Mushanzana was reassured that the program itself contained a component to cater for future events that may occur in these provinces even those outside the education sector. It is envisaged that work should be coordinated with other institutions such as meteorology who would advise on early warnings and with INGC who would assist with emergency support. • Regarding materials sold in Mozambique without the minimum quality of safety, Mr Munhazana commented that the State has its share of responsibility to produce legislation to ban the import and selling of low quality materials. He gave an example of some painting inks that are being sold in Lichinga, which immediately following its use (i.e. three months later) bleached even without rain, leaving the infrastructures very ugly. • The RPF documents are often very detailed, with all the specifications included but the contractors ignore them simply because they want to maximize their own benefits. • Before consideration can be given to infrastructure resilience, we must stop and think about humanity's own resilience, meaning the need to influence the human mindset and action. There are people who are resistant of change and will not implement the ERRP

	<p>guidelines without a program of awareness and education.</p> <ul style="list-style-type: none"> • With regard to projects taking place in the Niassa Province, developers often work without proper observance of scientific protocols and do not consider factors that need to be taken into account such as climate, characteristics of soils, the orientation of winds, water flows, rainfall, and temperatures, etc. As a result, infrastructure is totally or partially destroyed by natural disasters as a result of consideration of suitable scientific principles. • The transfer of schools from one area considered as a risky zone to another requires that climatic analyses are considered so as not to waste resources. • He remarked that developed countries never conduct work without proper climate modeling tools. During colonial times these were in place but no longer exist today. • He recommended that the ERRP works should apply climate modeling tools because the knowledge of the terrain is a very important determinant of the quality of any infrastructure.
<p>Mr. Moisés Ângelo Mecuanda, of the Education, Youth and Technology services (SDEJT) of the Lichinga District, commented as follows:</p>	<ul style="list-style-type: none"> • Mr Mecuanda asked whether the lack of resilience in infrastructure in Niassa was a problem of lacking human capacity. He proffered that the problem involved developers, contractors, and the supervising engineer. To be successful, a project requires a developer to gather basic information through which the project designs and specifications are made to take into account the prevailing conditions in the place where the project is intended to be implemented. Project plans are often drawn up in Maputo without knowledge of the terrain and conditions on site. He recommended that the documents should be prepared by the province that promotes the projects and should include specifications that are relevant to the areas where projects are implemented. • Contractors should not accept situations where developers approach them and offer projects without

	<p>proper planning and specifications. This compromises quality and contractors must be diligent and insist on sound planning in projects.</p> <ul style="list-style-type: none"> • The supervising engineer must also conduct their work responsibly and earnestly and must also be resilience against corruption. The correct specifications must be adhered to and no compromises must be allowed (i.e. if it is written in the specs that the cement / sand mixture is 1/3 on the ground, this must be the case and no short-cuts must be taken). • The quality of our infrastructure depends on the seriousness of each of these three entities (developer, contractor and supervising engineer). In the case of the BCI building when cracks appeared on the buildings, there was no accountability on the part of the contractor or the supervising engineer. • With regard to the construction materials extracted locally (sand, inert materials and wood), these are found in the province, but it will not be possible and it is neither feasible for the contractor to go to Niassa Lake to get quality sand when the budget is limited. You will always get sand at the place where it is cheaper (any river around) but this does not always meet the desired quality standards.
Crispini Nadala, representative of ARA Norte-UGBRL	<ul style="list-style-type: none"> • The developers failed to approach the institution that manages climate information, nor do they go to the local administration for coordination to obtain basic information. This requires a change of attitude by developers.
Mr. Vitorino Pinino	<ul style="list-style-type: none"> • Mr Pinino remarked that the major destruction by natural events take place mostly on state infrastructure (buildings, roads and bridges, schools and water supply systems, irrigation and energy supply). Infrastructure developed by individuals tend to offer greater resistance and this needs to be looked at closely. • He cited an example of a road built 2 years ago in the city of Lichinga by ANE which has now been destroyed by natural disasters.

Mr. Emilio José Chacaia	<ul style="list-style-type: none"> • Very often, corruption is what affects the quality of works (counterparts request in the award of works). • Mr Chacaia agrees that there is no quality sand for the construction of sturdy buildings in Lichinga. The houses built during colonial times that still stand today were constructed with materials extracted locally. Man is the biggest barrier to resilience. There is a lot of "nephewness" or nepotism in the award of works. • Resettled persons should be given equal or better conditions than they had before, including the award of DUATs for the new land they hold
Ms. Juliana Wandí	<ul style="list-style-type: none"> • The Diocese of Lichinga contributed 126 schools to the Niassa Province school network. These schools were mostly built by communities using local material. As the years went by the schools were transferred to the State, and the diocese remained with only 11 community schools, all of which are conventional. • She also criticized the ANE's road, which has been destroyed in less than a year, saying that in the education sector, conventional schools suffer more mainly ceilings from natural disasters than the community schools constructed with local materials.
Mr Sidónio Johane from ANE	<ul style="list-style-type: none"> • The road which disappeared in 2 years is within the municipal area and not under the direct responsibility of ANE. ANE offers support and supervision, but the responsibility for hiring and managing municipal roads lies with the municipality of Lichinga. • The direct responsibility of ANE is on national and regional roads, and one example is the Lichiga-Cuamba road that will undergo a rehabilitation.
Mr. Cristiano Rafael, Manager of the CEP of Niass	<ul style="list-style-type: none"> • The resilience recovery of infrastructures affected by floods must be preceded by a detailed case-by-case survey to determine the causes of their destruction. It should be ascertained whether the infrastructure has suffered due to poor quality of the materials used or their application, or other factors. • A one-size-fits-all solutions should be avoided because the situation in Majune is different from the

	<p>situation in Nipepe and Nipepe is also different from Ngauma, and so on.</p> <ul style="list-style-type: none"> Contractors are worried about making profits. If the price is not fair the quality of the work will always be impaired
Mr. Domingos Mirione	<ul style="list-style-type: none"> In Niassa Province, there is a challenge with compliance to the Laws and regulations including the need to conform with the specifications contained in the RPF documents; Given that resettlement is expensive and impacts on transferred people, the negative impacts thereof can be minimized reducing school areas and having the infrastructure erected vertically, in the form of tall buildings, which would also make our cities and towns beautiful.
Mr. Tomás Inácio Munhazana	<ul style="list-style-type: none"> Using the analogy of a marketing company, he argued that the company should start its business within the company, among the workers, so that everyone knows what marketing is all about before it spreads out there. This support the thinking that the resilience of infrastructures starts with the resilience of the human being him/herself. The transfer of people away from their areas of origin has consequences people ought to be duly consulted because they themselves are aware of the impacts that affect them. The resettlement of schools can affect the level of educational success because children may be away from schools, which means they must travel long distances on foot since Niassa has no transportation.
Mr. Geraldo Lucas used the floor for the second time to reiterate:	<ul style="list-style-type: none"> The need and relevance of conducting baseline study prior to implementation of any project. In the water sector the Diocese always does these types of studies and the success rate is above 90%. Thus, it is recommended that all sectors use this technique in their projects. In the construction sector, he recommended that the three actors (project developer, contractor and

	<p>supervising engineer) dedicate one or two days of joint meetings to review the different aspects of the project at the beginning. He shared his experience during the rehabilitation of the Lugela Water Supply system, which when everything seemed to be ready to start, the client called for contractor to submitted the project. Clearly, there is a flaw here: the non-separation of roles in the elaboration / supervision and execution of the work, which then affect the quality.</p>
<p>Mr. Pedro Fernandes, representative of the National Directorate of Water Resources Management, PRRE coordinating institution, stated as follows:</p>	<ul style="list-style-type: none"> • Issues raised at the meeting are part of us and that we are an integral part of the solution. • The location of schools is the responsibility of local people who should move classrooms from low lying areas that are prone to disasters to upper zones. • The next meetings to discuss ERRPs should be attended by all sectors so that participants can contribute their local knowledge and understanding. • The Ministry of Education and Human Development should send brigades to the field to gather basic information and to consult the local populations when contemplating building a school. Even so if something is found wrong, there is absolutely no room for anyone, especially the contractor, to propose changes to the Ministry; • The idea of these consultations is to bring everybody to think together about the destroyed schools, the resettlement locations and expected environmental and social impacts. • He added that the northern zone is very prone to the effects of natural disasters, so our projects should be preceded by studies and always avoid the placement of schools alongside rivers. • He alluded to the various interventions on the quality of works where the role of the developer, contractor and supervising engineer had been constantly questioned. The important thing is to know that we are all in the same boat and if one of us notices an error, he must immediately alert others to correct the error immediately.

	<ul style="list-style-type: none"> • With regard to the corruption and nepotism, he said that we as technicians take much more responsibility than our leaders in selecting the winning firms. He recommended that when we are choosing contractors we must focus on the technical capabilities, legal aspects and discharge certificate. • Finally, he said that NDWRM will come to Niassa many times during the ERRP implementation phase of the projects in order to attain the goal of building resilience classrooms and schools.
Ms. Luísa Vanessa Teixeira Lopes	<ul style="list-style-type: none"> • While not wanting to repeat what had already been addressed by her colleague, she clarified that at this stage of the ESMF/RPF design it was not mandatory to go to the District. However, in the implementation phase, when specific ERRP are known and the sites of their implementation are well identified consultation meetings will/should be held with the effected affected communities. • The issue of baseline studies that determines aspects of climate and wind direction as well as the availability and quality of materials is very important for the quality and resilience of infrastructure. • She thanked all participants and announced that their contributions were collected and will be shared with top management of the Ministry and will be taken into account in the preparation of the environmental, social and resettlement policy framework.
Mr. Eduardo Macuácuá, the Consultant	<ul style="list-style-type: none"> • Thanked all the participants for valuable contributions and shared relevant contacts for additional contributions on potential environmental and social impacts. • He then took the opportunity to wish a good return to the four participants who came from the districts and invited everyone to a snack served on the premises. He also announced to those who had come from the districts meet for logistical issues.

Photos records of the meeting



Potenciais Impactos Extraídos das Discussões da Reunião Pública

Potential Impacts from Public Meeting Discussions

Nº	Identified Impacts	Safeguarded Measures
1	Environmental and social issues may not be considered in the ERRP due to lacking directives and budgets on the part of the developer (Education Sector)	The RPF document should include or clearly state the budget for the environmental and social impacts component
2	In the implementation ERRP there may be gross negligence on the part of contractors	The supervision component should be activated to ensure the implementation of the Environmental Management Plan.
3	Communities may lose their land (residential and farming areas)	Community consultation should be guaranteed in the act of allocating land as well as the payment of compensation or resettlement of the PAPs A compensation payment's budget line for ERRP should be included in the State Budget.
4	Zones hosting the resettled communities may not offer conditions equal to or greater than the previous ones.	Resettlement, in addition to offering shelter, should be concerned with securing other services (water supply, health services, education, access to electricity, etc.) to ensure conditions equal to or above the previous ones
5	The risk of abandonment of works exists and / or delivery of low quality works	Contracts must be rigid in terms of disbursements and the contractors must provide guarantees. Hiring of a supervising engineer is mandatory

6	The employment gains of the local population may be minimal given other competing objectives (agriculture activities)	Local public consultations / baseline studies are needed to determine the conditions for the implementation of ERRP.
7	Extraction of building materials (wood and sand) has impacts on the environment	The Environmental and Social Management Framework should provide recommendations to minimize the impacts of extracting these materials
8	During the implementation of ERRP there are risks of corruption and "nephewness", a term used to refer to nepotism	Anti-Corruption Institutions and Green Line to deliver complaints must be in place and in use.
9	The transfer of schools to safer areas may affect the access to education due to the distances	Resettlement sites should be researched including the analysis of climate factors
10	The materials sold in the local market (cement, zinc sheets, iron, painting ink, etc.) are normally of very low quality and not offering the resilience that is intended	Definition of specifications and supervision guidelines

ANNEX 4: Minutes of public meetings - Zambezia Province



REPUBLIC OF MOZAMBIQUE
MINISTRY OF PUBLIC WORKS, HOUSING AND WATER RESOURCES
National Directorate of Water Resources Management

**MINUTES OF PUBLIC CONSULTATION MEETING ON THE EMERGENCY
RESILIENCE RECOVERY PROJECT (ERRP) FOR THE ZAMBEZIA PROVINCE
COVERING EDUCATION INFRASTRUCTURES**

FIRST PUBLIC CONSULTATION MEETING

**UNDER THE ENVIRONMENT AND SOCIAL MANAGEMENT FRAMEWORK
(ESMF) AND RESETTLEMENT POLICY FRAMEWORK**

Quelimane, 14th of November 2016

In line with the Decree 130/2006 (of July 19) approving the general guidelines of the process of public participation in the Environmental Impact Assessment process, a public consultation meeting was held on the 14th of November 2016 in the City of Quelimane, in a Conference Room at Chuabo Hotel, with the objective of:

- (vii) Providing information about the project to project beneficiaries, the local communities, as well as civil society organizations and government entities;
- (viii) Identifying and assessing the potential impacts of the projects on the natural environment and in socio-economic conditions in the areas affected by the project; and
- (ix) Capturing input and contributions from participants which will assist the project team to determine their aspirations and concerns.

The meeting was facilitated by Ms. Duartina Francisco, who was standing in the place of Eduardo Macuacua and was attended by representatives of different sectors of Government, the Private Sector and NGOs (i.e. see attached attended register for a list of people who attended the meeting). Two representatives of the National Directorate of Water Resources Management [i.e. Luísa Vanessa Teixeira Lopes (Environmental and Social Safeguards Specialist) and Pedro Fernandes (Senior Adviser)] attended the meeting as representatives of the coordinating entity of the emergency resilience recovery project.

The meeting started at 14h10 o'clock (Central African Time - GMT/UTC + 2h Standard Time) with the consultant welcoming all to the meeting. All attendees were asked to introduce themselves and highlight the names of institution they presented and their specific role.

Following the introductions, the consultant expressed a word of appreciation to those attendees from areas covered by the emergency resilience recovery project. Ms Francisco then proceeded to present basic information about the project that had been prepared for the Zambezia meeting. Some of the key points highlighted included the following:

- Following natural disasters that affected the central and northern regions of the country between the years 2014 and 2015, the government of Mozambique requested and obtained a loan from the World Bank to implement emergency recovery programs to repair infrastructure and facilities damaged during the natural disasters;
- The infrastructure that was damaged included facilities for education, irrigation systems, etc.;
- Several institutions are responsible for the Emergency Resilience Recovery Project, namely the National Directorate of Water Resources Management (DNGRH) as the coordinating institution, the Ministry of Education and Human Development (MINEDH), the National Irrigation Institute (INIR), as well as the Water and Sanitation Infrastructure Administration (AIAS).
- There were several negative impacts associated with the ERRP program in Zambezia which were highlighted in the meeting.
- The ERRP project focused primarily on sectors that had been detrimentally affected by the natural disasters, i.e. facilities in the education sector, water supply facilities, irrigation systems, as well as the construction of weirs.

- The successful implementation of these projects is informed by a suitable Environmental and Social Management Framework (ESPF), as well as a Resettlement Policy Framework (RPF). These instruments assist in identifying the potential environmental and social impacts associated with the implementation of ERRP.
- One of the objectives of the public consultation process was to share lessons with participants about potential social and environmental impacts that have been identified as well as solicit input from participants with a view to mitigating the potential negative impacts during the project implementation phase.
- Ms Francesco invited participants to offer comments and suggestions that could assist in the identification of impacts that could result from the implementation of the ERRP.
- Participants were also invited to assist with recommendations for the management of environmental and social impacts as well as management of involuntary resettlement.

The types of inputs and comments raised by the participants included the following:

- Mr. Pedro Fernandes (from the NDWRM) indicated that the objective of public consultation meetings was to gather contributions from participants on potential environmental and social impacts that had not already been addressed in the document in order that such suggestions could be taken into account during implementation of the ERRP.
- Mr. Sérgio Andela (ARA CN) welcomed the presentation and thanked the presenter for the comprehensive amount of detail in the document.
 - Mr Andela advised that during the process of the construction of dykes requires that one takes into account chambers and conduct suitable public consultation with affected communities. A relevant example given was that of the construction of dykes in the Maganja da Costa irrigation system which resulted communities experiencing transfer or loss of their soils without prior communication and there was no compensation made for the losses suffered by the communities.
 - ✓ The importance of combating soil erosion during Dyke construction and rehabilitation should involve local communities in planting the elephant grass and erosion resistant crops. Another aspects mentioned by Mr Sergio is the importance of sensitizing the community about the projects to be implemented in their area.
- Mr. Pascoal Alfredo (ARA CN), began his contribution by challenging the validity of the Water Law 43/2007 of October 30, regarding:
 - The water law in Mozambique was inherited from the past century (i.e. has been in use since 1980) and has not been updated ever since.
 - The draft ESPF highlights many negative impacts associated with the project compared to positive ones. What would be the purpose of highlighting so many negative impacts? A cost and benefit analysis ought to be undertaken when implementing a project of this nature. He argued whether the negative impacts listed under the dyke construction

would mean that the negative impacts outweighed the positive impacts of building a dyke. He cautioned against obsession with identifying negative impacts which could render the project unfeasible and discourage implementation. Instead of focusing on identifying and listing negative impacts associated with projects, the focus should be on proposing suitable mitigation measures that could be implemented to improve project benefits.

- Mr. Fernando Arlindo (from SDPI Mocuba) advised on resettlement of people as a result of projects and indicated that it is necessary to consider where inert materials are to be extracted. Furthermore, he argued that it is necessary to replace public utilities displaced by projects (i.e. provision of basic services such as schools, health centers, markets, water sources, etc.). Even though the Pre-settlement Action Plan (PAPs) may consider the use of temporary safe areas during the floods or other type of severe natural disasters, there is a risk that communities will go back their original areas of residence because basic services and facilities have not been provided in the settlement areas. Residents tend to return to unsafe areas in search of better living conditions for the simple reason that they cannot settle in an area without adequate resources for survival.
- Mr. Braz Anselmo (from DPAGZ) suggested focus should be placed on inter-ministerial and institutional coordination as this is one of the key areas of success in the implementation of projects that involve communities. It is not enough to conduct public consultations and identify negative impacts associated with projects without guaranteeing institutional synergy and cooperation during project implementation. The Luabo Dams projects were implemented from Mopeia, passing through the whole plantation until Luabo village even though use of the plantations was not desirable. When the floods came, infrastructure was destroyed and there was no inter-ministerial coordination to rehabilitate the damaged infrastructure. The bridge over the Zambezi River was built to link Caia to Chimwara. If this project had been better planned, the construction of weirs could have been considered to divert waters to irrigate agricultural areas. However, this did not happen and the evidence of the missed opportunity can be seen during the rainy season.
- Mr. Bernizio Mutemba (SDPI Mocuba), asked whether the ESMF will include guidelines to make it easy for the Districts to implement the ERRP. He asked if the ESMF would link with the district's plan for climate change adaptation and if there is consideration being given to the incorporation of the plans of the districts in the ESMF. The technical specifications of infrastructure must be stipulated in order to avoid costly rectification at the end of the project. Mr. Bernizio identified the following negative social impacts associated with resettlement projects :

- Disruption of social cohesion as people from different regions with varying cultures and backgrounds may be forced to resettle together;
 - Resettled people may be displaced from areas with basic services and resettled in areas without services.
- Ms. Fatima Mudanisse of the Provincial Directorate of Land Environment and Rural Development (DPTADR) mentioned the need for an EIA, Environmental Management Plan and measures to mitigate the conceivable impacts associated with the implementation of the ERRP. He also highlighted the importance of drafting and approving a Resettlement Action Plan to inform the implementation of a project of this nature.
- Mr. Pedro Fernandes from National Directorate of Water Resources Management (DNGRH), clarified that:
 - Environmental safeguards and other documents have already been prepared prior to public consultation. He emphasized that the ERRP for Zambezia Province was focused on the four components (education, water supply, irrigation and dyke infrastructures) to be implemented with the World Bank funds.
- Ms. Luísa Vanessa from NDWRM clarified that it was important to identify both the negative and positive environmental and social impacts associated with the ERRP in Zambezia, Nampula and Niassa. The process of listing negative impacts is not intended to discourage the developer or other decision-making bodies, but rather to maximize positive benefits and ensure that negative impacts are not ignored during the implementation phase of the project.
- Mr. Eugénio Maurício from AIAS welcomed the presentation and made reference to accidents that may occur in works areas during project establishment as a result of the use of machinery. He recommended the need for the ESMF to clearly stipulate health and safety-related issues to be considered during project establishment.
- Mr. Braz Anselmo of the provincial directorate for agriculture Zambezia, speaking for second time, raised several issues related to negative impacts on infrastructure:
 - ✓ He highlighted negative impacts of winds on infrastructure;
 - ✓ He pointed out the need for studies to inform suitable placement of ERRP-related infrastructure.
 - ✓ Some of our infrastructures are located in dunes and are prone to risk of damage by strong winds.
 - ✓ In addition, the some infrastructures is of such poor quality and offers no durability;
 - ✓ Another impact identified is the loss of land by erosion and the salinity of soils.

- ✓ He also mentioned the importance of building dams for the management of water resources during the rainy season.
- Ms. Maria Madalena from INGC expressed her appreciation of the presentation and acknowledged the natural diversity of Zambezia Province particularly with regard to its vulnerability to natural disasters and the importance of coordination between sectors to solve the problems or negative impacts caused by natural disasters.
 - ✓ Mr Madalena acknowledged that whenever there is a job, it is normal that young people drop out from school and go look for employment as a way to improve their living conditions and livelihood of their families.
 - ✓ She expected that there will be both positive impacts as people will get jobs and also negative impacts associated with young people leaving school.
 - ✓ There is a dilemma of rivers flooded during the rainy season and creating mayhem, while the same rivers do not have enough water for citizens during drier prts of the season.
- Mr. Bernizio Mutemba from SDPI in Mocuba took the floor to talk about the education sector. He mentioned that the location of schools in the highlands creates a risk during windy conditions. The quality of the infrastructure for the ERRP should be clearly stipulated in the Request For Proposal documents that are issued in order to avoid the potential for substandard construction work if contractors are not properly supervised. There is a need for clarity in the technical specifications documents to avoid placing responsibility to contractors for aspects that were not advocated in the RPF document.
- Ms. Ana Inês da Conceição of COLLINS talked about resettlement with specific focus on people living with HIV and AIDS. The fact that there is no provision of antiretroviral treatment for resettled people who are affected by HIV-Aids would mean that they must travel long distances to health centers.
- Mr. Arcanjo Árabe from the Institute of Meteorology highlighted the possibility of minimizing negative impacts of natural disasters such as strong winds and cyclones. School infrastructure gets affected largely because of the way such infrastructure are built. It is very important to build barriers such as trees to reduce the impacts of these natural phenomena. Buildings in areas without tree shields tend to get damaged by natural forces compared to buildings in areas with tree shields.
- Ms. Júlia Duarte Uarela from AIAS highlighted the issue of alternative water retention in districts and asked what the ERRP's alternative water retention options would be in these districts. She commented that there is a lot of work to remove harnesses during the floods

of 2015. The use of groundwater would be an important alternative and would almost guarantee water supply in districts that are affected by drought.

- At the end of the meeting, the Consultant thanked everyone for their contributions gave them contact details of Eduardo Macuácuá whom they could contact for additional information. The Consultant then invited Mrs. Júlia Duarte to offer administrative and logistical clarifications regarding the project. Refreshments were offered to all participants at the end of the meeting.

Photo records during the meeting



Potential Impacts Extracted from the Discussions during the Public Consultation Meeting - zambezia

N°	Identified Impacts	Safeguard Measures
1	Break of social cohesion.	The RPF is called here for the resettlement and payment of compensation to the PAPs.
2	Land conflicts resulting from chambers in the construction of Dams	The extraction of sand to be used in construction should be preceded by a community consultation.
3	Erosion affecting educational infrastructures	The ESMF should take into account the erosion phenomenon - it is recommended to create drainage ditches, construction of barriers and channels for the passage of water.
4	The lack of construction of barriers and dams thus creating floods in the rainy season and droughts during scarcity of rainfall	The ESMF shall recommend measures to mitigate the negative effects of floods;
5	Resettlement of people to areas without basic services place PAPs at risk of returning to the original areas	Resettlement zones should be equipped with basic services including leisure facilities.
6	The low quality of educational infrastructure works, irrigation and Dams resulting from mass damages (lack of technical quality of hired contractors);	Definition of quality standards of the works taking into account the life time of the works.
7	Lack of alternatives for water retention	The ESMF should recommend alternatives forms of water retention
8	Lack of coordination between sectors and ministries	Strengthen the inter-ministerial and institutional partnership in project implementation and impacts mitigation.

9	In infrastructure construction projects, there is a need to look at PLWHA regarding access to ART services	Provision of civic education and distribution of condoms
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ANNEX 5: MITADER PRE-ASSESSMENT FORM (“FICHA DE PRE-AVALIAÇÃO”)

Environmental Information for Project Development

1 Name of project:

2 Type of activities:

a) Tourism: -----

b) Industrial: -----

c) Agricultural: -----

d) Other: -----

Specify: -----

3 Identification of components: -----

4 Contact: -----

5 Location of activities:

5.1 Administrative Localization (town, city, district, province, geographical position)

5.2 Insertion: (Urban – Rural)

6 Zoning:

Residential: -----

Industrial: -----

Services: -----

Parks/gardens: -----

7 Description of activities

7.1 Infrastructures and dimensions (attach map, etc.): -----

7.2 Associated activities: -----

7.3 Short description of technology operation: -----

7.4 Principal and complementary activities: -----

7.5 Type, origin and number of workers: -----

7.6 Type, origin and quantity of primary material: -----

7.7 Chemical product proposed of use -----

7.8 Type, origin and quantity of water and energy resource: -----

7.9 Type, origin and quantity of combustibles and oils proposed to use: primary material: -----

7.10 Other necessary resources: -----

8 Land ownership (legal situation, owners, modality of acquiring, etc.): -----

9 Alternatives for location of activities: -----

(Implementation justification, etc.)

10 Short information on local and regional environmental references:

10.1 Physical Characteristics for implementation of activities:

Plains

Plateau

Valley

Mountains

10.2 Principal Ecosystems:

River

Lake

Sea

Land

10.3 Location/zone:

Coastal Zone

Continental Zone

Island

10.4 Type of principal vegetation:

Flora

Savana

Others (specify)

10.5 Land use:

Residential

Industrial

Protected area

Others (specify)

10.6 Principal existing infrastructures in the protect area: -----

11 Complementary Information:

Location map

Other information related to the project activities

ANNEX 6: PROPOSED ENVIRONMENTAL AND SOCIAL SCREENING FORM

Project title.....

Project number.....

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 type and scale of the construction/rehabilitation activity (total area, required land, approximate size of floor area).

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, energy and water pipes/lines installations, access road etc.

Please describe how the construction/rehabilitation activities will be carried out, including complementary activities and infrastructures and resources required e.g. roads, disposal site, water supply, energy requirement, human resource etc.

PART B: BRIEF DESCRIPTION OF THE ENVIRONMENTAL SITUATION AND IDENTIFICATION OF ENVIRONMENTAL AND SOCIAL IMPACTS

Please describe the proposed infrastructures location, sitting; surroundings (include a map)

Describe the land formation, topography, vegetation in/adjacent to the activity area

Estimate and indicate where vegetation might need to be cleared.

PART C: OTHER ENVIRONMENTAL ASPECTS

#	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?			
	Is there any intact natural forests?			
	Is there any surface water courses, natural springs?			
	Is the water table close to the surface? i.e. 0,5 m or less?			
	Are there any wetlands (lakes, rivers, swamp, seasonally inundated areas) in the proximity of the site?			
	Is there any area of high biodiversity?			
	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			
	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 (national park, national reserve, world heritage site etc.)?			
	Is the infrastructure likely to alter any historical, archaeological, cultural heritage traditional (sacred, ritual area) site or require excavation near same?			
	Will the project involve any involuntary land acquisition?			
	Will there be any voluntary land acquisition?			
	Will the activities be located in any vacant public land?			
	Is the site located in any or near polluted area (near a waste dump)?			
	Is the site located in an area of steep slope and or susceptible to landslides or erosion of soils?			
	Is the site located to agricultural land?			
	Is the site located in the proximities of tourism activities?			
	Is the project site susceptible to natural disasters (flooding, fire, cyclones and earth quake)?			
	Is the site located in area of population concentration points (schools, markets, health facilities, water sources and commercial areas)?			
	Will the construction/rehabilitation activities result in the permanent or temporary loss of crops, fruit trees and household			

	infra-structure (such as granaries, outside toilets and kitchens, livestock?)			
	Will the construction/rehabilitation works interfere with or block access, routes etc. (for people, livestock and wildlife) or traffic routing and flows?			
	Will the operating noise level exceed the allowable noise limits?			
	Will the construction/rehabilitation works require large number of staff and laborers; large/long-term construction camp?			
	Will the activities result in emission of large amounts of dust, hazardous fumes?			
	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 during construction or operation?			
	Will the operation involve use of considerable amounts of natural resources (construction materials, water spillage, land, energy from biomass etc.) or may lead to their depletion or degradation at points of source?			
	Has public consultation and participation been sought?			

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: -----

PART D: MITIGATION MEASURES

For all “Yes” responses, please briefly describe the measures taken to this effect. Subsequent to completion of the present Environmental and Social Screening Form, the analysis by the District Environmental Commission will follow in order to classify the activity into one of the categories A, B or C.

ANNEX 4: ENVIRONMENTAL AND SOCIAL CHECKLIST

For each activity proposed, fill the corresponding section on the checklist

Civil work activity	Issue to be addressed	Yes	No
Construction/rehabilitation	Are there agricultural lands in the proximity of the site (cultivated or non-cultivated lands) or any other natural resources likely to be affected by reconstruction/rehabilitation works?		
	Are there appropriate facilities to handle wastes resulting from the proposed construction/rehabilitation works?		
	Will the reconstruction/rehabilitation works require clearing of vegetation and excavation of soils?		
	Will the use of local construction materials (borrow pit materials for brick manufacturing, need for firewood and timber harvesting) be required during the reconstruction/rehabilitation works?		
	Are there pollution risks of surface and groundwater as a result of the proposed construction/ rehabilitation works?		

Where the response is “YES” in the above Table, reference should be made to the proposed mitigation measures in the Table on section 7.5, describing the relevant mitigation measures listed.

ANNEX 7: GENERAL ENVIRONMENTAL AND SOCIAL CLAUSES FOR CONTRACTORS FOR THE EMERGENCY RESILIENCE RECOVERY PROJECT

1. The Contractor shall comply with an Environmental and Social Management Plan (ESMP) for the works to be carried out, and shall prepare the work plan considering relevant provisions of the ESMP.
2. The Contractor shall maintain status on site after completion of civil works to ensure that significant adverse impacts arising from such works have been appropriately addressed.
3. The Contractor shall adhere to the proposed activity implementation schedule and the monitoring plan to ensure effective feedback of monitoring information to project management is provided and that impact management can be implemented properly.
4. Apart from regular inspection of the sites by the Site Engineer, the Project Proponent may appoint an inspector to oversee compliance with environmental and social regulation and proposed mitigation measures. MITADER, DPTADER, District Environmental Focal Points or other relevant stakeholders may carry out similar inspection duties. In all cases the Contractor shall comply with directives from such inspectors to implement measures required.
5. The Contractor shall implement all measures necessary to avoid adverse environmental and social impacts wherever possible, restore work sites to acceptable standards, and abide by any environmental and social requirements specified in the ESMP.
6. If the Contractor fails to implement the approved ESMP after written instruction by the Site Engineer within the stipulated time, he/she shall be liable and made accountable in accordance with the rules and regulations in place in Mozambique.
7. The Contractor shall prepare a Health, Safety and Hygiene Management Plan to ensure adequate management of the health, safety, environmental and social aspects of the works, including implementation of the requirements of these general conditions and any specific requirements of an ESMP for the works.
8. The Contractor's Health, Safety and Hygiene Management Plan will be reviewed and approved by the Project Proponent prior to the beginning of the works, to ensure that the Contractor's Health, Safety and Hygiene Management Plan covers all of the identified impacts, and has appropriate measures to counteract any potential impacts.
9. The Contractor shall prepare monthly progress reports to the Site Engineer on compliance with these general conditions, the project ESMP if any, and his/ her own Health, Safety and Hygiene Management Plan.

10. The Contractor shall provide sufficient training to his own personnel to ensure that they are all aware of the specifications of the ESMP of the Health, Safety and Hygiene Management Plan, and are able to fulfil their expected roles and functions.
11. The contractor shall comply with all relevant Mozambican laws and regulations relating to construction, environmental and social management.
12. The Bill of Quantities should contain the item “Compliance with Environmental Management Conditions”. This item should cover costs associated to the observance of Environmental and Social Compliance as well as with Health and Safety during the works. No other payments will be made to the Contractor for compliance with any request to avoid and/or mitigate an avoidable environmental and social or health and safety impact

ANNEX 8: REPORTING TEMPLATES

Safeguards Quarterly Report

Name of Project: Emergency Resilience Recovery Project

Sub-Component: A.1 - Rehabilitation of Dykes and Damaged Weirs

Name of District	
Name and Position of Review Authority Completing the Quarterly Report	
Reporting Period	
Date of Report	

Activity Type	Status of Implementation (not initiated/ ongoing/ completed)	General Site Conditions (Good/ Average/ Bad)	Compliance with ESMP (Y/ N)	Compliance with Health, Safety and Hygiene Plan (Y/ N)	Observations
Rehabilitation of dykes (name and location of dyke)					
Rehabilitation of weirs (name and location of weir)					

1. Were there any unforeseen environmental or social problems associated with any activity implemented in the quarter? If so, please identify the activity/ activities and summarize the problem (s), and what was or will be done to solve the problem.

Activity	Issue(s)	Actions Taken	Follow-up required

2. What factors contribute or detract from complying with the ESMP?

3. Have any other environmental and social assessments been carried out in your district?

4. Have you noticed any particular problems with implementing the ESMF in the past year (e.g. administrative, communications, forms, capacity)? If so, please describe them briefly.

5. Have any training been undertaken in your district in the last quarter? If so, in which areas, when did they take place and to whom where they provided? What/ is additional training required?

Safeguards Quarterly Report**Name of Project: Emergency Resilience Recovery Project****Sub-Component: A.2 - Rehabilitation of Rural Infrastructure in Maganja da Costa**

Name of District	
Name and Position of Review Authority Completing the Quarterly Report	
Reporting Period	
Date of Report	

Activity Type	Status of Implementation (not initiated/ ongoing/ completed)	General Site Conditions (Good/ Average/ Bad)	Compliance with ESMP (Y/ N)	Compliance with Health, Safety and Hygiene Plan (Y/ N)	Observations
Rehabilitation of irrigation systems					
Rehabilitation of rural access roads and bridges					
Rehabilitation of an electricity supply line					

1. Were there any unforeseen environmental or social problems associated with any activity implemented in the quarter? If so, please identify the activity/ activities and summarize the problem (s) and what was or will be done to solve the problem

Safeguards Quarterly Report

Name of Project: Emergency Resilience Recovery Project

Sub-Component: A.3 - Rehabilitation of Mocuba Drinking Water Supply

Name of District	
Name and Position of Review Authority Completing the Quarterly Report	
Reporting Period	
Date of Report	

Activity Type	Status of Implementation (not initiated/ ongoing/ completed)	General Site Conditions (Good/ Average/ Bad)	Compliance with ESMP (Y/ N)	Compliance with Health, Safety and Hygiene Plan (Y/ N)	Observations
Rehabilitating and restoration of the Mocuba drinking water supply system					

1. Were there any unforeseen environmental or social problems associated with any activity implemented in the quarter? If so, please identify the activity/ activities and summarize the problem (s) and what was or will be done to solve the problem

Activity	Issue(s)	Actions Taken	Follow-up required

2. What factors contribute or detract from complying with the ESMP?

3. Have any other environmental assessments been carried out in your district?
4. Have you noticed any particular problems with implementing the ESMF in the past year (e.g. administrative, communications, forms, capacity)? If so, please describe them briefly.
5. Have any training been undertaken in your district in the last quarter? If so, in which areas, when did they take place and to whom where they provided? What/ is additional training required?

Safeguards Quarterly Report

Name of Project: Emergency Resilience Recovery Project

Sub-Component: A.4 –Rehabilitation and Reconstruction of Climate Resilience Schools

Name of District	
Name and Position of Review Authority Completing the Quarterly Report	
Reporting Period	
Date of Report	

Activity Type	Status of Implementation (not initiated/ ongoing/ completed)	General Site Conditions (Good/ Average/ Bad)	Compliance with ESMP (Y/ N)	Compliance with Health, Safety and Hygiene Plan (Y/ N)	Observations
Rehabilitation of conventional classrooms					
Construction of mixed-material classrooms					

1. Were there any unforeseen environmental or social problems associated with any activity implemented in the quarter? If so, please identify the activity/ activities and summarize the problem (s) and what was or will be done to solve the problem

Activity	Issue(s)	Actions Taken	Follow-up required

2. What factors contribute or detract from complying with the ESMP?
3. Have any other environmental assessments been carried out in your district?
4. Have you noticed any particular problems with implementing the ESMF in the past year (e.g. administrative, communications, forms, capacity)? If so, please describe them briefly.
5. Have any training been undertaken in your district in the last quarter? If so, in which areas, when did they take place and to whom where they provided? What/ is additional training required?

Safeguards Annual Report

Name of Project: Emergency Resilience Recovery Project

Name and Position of Review Authority Completing the Quarterly Report	
Reporting Period	
Date of Report	

Province/ District	Sub-component	Status of Implementation (not initiated/ ongoing/ completed)	Compliance with ESMP (Y/ N)	Overall Performance Assessment (Good/ Average/ Bad)	Observations
	Rehabilitation of Dykes				
	Rehabilitation of damaged Weirs				
Maganja da Costa	Rehabilitation of Irrigation Systems				
	Rehabilitation of rural access roads				
	Rehabilitation of rural access bridges				
	Rehabilitation of an electricity supply line				
Mocuba	Rehabilitation of Water Supply System				
	Rehabilitation of conventional classrooms				

	Construction of mixed-material classrooms				
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1. Were there any unforeseen environmental or social problems associated with any activity implemented in the quarter? If so, please identify the activity/ activities and summarize the problem (s) and what was done to solve the problem.

Activity	Issue(s)	Actions Taken	Follow-up required

2. What were the key challenges and achievements in terms of complying with the ESMP, and what were the key factors that contributed or detracted from complying?
3. Have any other environmental and social assessments have been carried out in your district?
4. Have you noticed any particular problems with implementing the ESMF in the past year (e.g. administrative, communications, forms, capacity)? If so, please describe them briefly.
5. Have any training been undertaken in your district in the last quarter? If so, in which areas, when did they take place and to whom where they provided? What/ is additional training required?

