

**UNDP MALAWI**

**SUSTAINABLE DEVELOPMENT GOALS HOTSPOT ACCELERATION  
INITIATIVE (SHAI) PROJECT**

**ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)**

**CONSTRUCTION OF SOLAR PUMPED IRRIGATION SCHEME**

**LOCATION – TIZORA AREA IN NSANJE DISTRICT**

**Luckson Ngalu, UNDP Engineer**

**July 2021**



# Table of Contents

1. INTRODUCTION .....	2
2. UNDP SOCIAL AND ENVIRONMENTAL STANDARDS (SES) .....	2
3. UNDP'S SOCIAL AND ENVIRONMENTAL SCREENING PROCEDURE (SESP) .....	2
4. SCREENING AND ESMP PREPARATION .....	3
4.1 Site screening .....	3
4.2 Objectives of the screening process .....	3
4.3 Methodology .....	3
4.4 Land Access and Management .....	4
5. ENVIRONMENTAL AND SOCIAL IMPACTS .....	4
5.1 Generic Environmental and Social Impacts .....	4
5.1.1 Generic Social Positive impacts .....	4
5.1.2 Generic Social Negative impacts .....	5
5.1.3 Generic Environmental Positive impacts .....	5
5.1.4 Generic Environmental Negative impacts .....	5
5.2 Environmental and Social Impact Mitigation Measures at Construction Phase .....	5
5.2.1 Loss of vegetation .....	6
5.2.2 Accumulation of wastes .....	6
5.2.3 Soil erosion and dust emission .....	6
5.2.5 Risk of water and air pollution .....	6
5.2.6 Occupational health and safety of workers and the public .....	6
5.2.7 Spread of HIV/AIDS and other Sexually Transmitted Infections (STIs) .....	6
5.2.8 Land degradation due to creation of borrow pits .....	7
5.2.9 Risk of competing for resources .....	7
5.2.10 Obstruction of foot paths .....	7
5.2.11 Gender-based violence (GBV) and sexual exploitation and assault (SEA) .....	7
5.3 Environmental and Social Management and Monitoring Plan (ESMMP) .....	7

**Luckson Ngalu, UNDP Engineer**



## 1. INTRODUCTION

In a quest to accelerate achievement of the Sustainable Development Goals (SDGs), there is an advocacy to adopt hotspots approach to local development. Malawi is one of the first countries in Africa to adapt this approach to local development planning and prioritization of service delivery. The country selected Phalombe and Nsanje Districts as the first phase of roll out. Implementation of the initiative (formerly as a project) began in January 2020 with Irish Aid as the donor. The project is implementing the first service response in GVH Tizora, Nsanje District where a solar powered irrigation scheme and boreholes are going to be constructed and drilled respectively.

## 2. UNDP SOCIAL AND ENVIRONMENTAL STANDARDS (SES)

UNDP Malawi is committed to mainstream social and environmental sustainability in its projects as underpinned by the SES whose objectives include:

- Strengthening the social and environmental outcomes of the projects
- Avoid adverse impacts to people and the environment
- Minimize, mitigate and manage adverse impacts where avoidance is not possible
- Strengthen UNDP and partner capacities for managing social and environmental risks
- Ensure full and effective stakeholder engagement, including stakeholder response mechanism (SRM)

At the core of SES are the issues to do with (1) human rights, (2) gender equality and women empowerment and (3) environmental sustainability.

## 3. UNDP'S SOCIAL AND ENVIRONMENTAL SCREENING PROCEDURE (SESP)

The SESP is aligned to the SES and its objectives include:

**UNDP Engineer**



**Luckson Ngalu,**

- Integrate the SES overarching principles (human rights, gender equality and environmental sustainability)
- Identify social and environmental risks and their significance
- Determine the project risk level (low, moderate, high)
- Determine the level of social and environmental assessment and management required to address potential risks and impacts.

**UNDP Engineer**

**Luckson Ngalu,**



## 4. SCREENING AND ESMP PREPARATION

### 4.1 Site screening

UNDP Malawi carried out screening of all proposed construction sites in compliance with the UNDP Social and Environmental Standards (SES), National Environmental Policy 2004, Environmental Management Act 1996, Environmental Impact Assessment guidelines 1997. Screening was carried out in accordance with UNDP Social and Environmental Screening Procedures (SESP). The aim of the screening process was to determine the potential environmental and social impacts and appropriate mitigation measures associated with the project.

### 4.2 Objectives of the screening process

The screening process was carried out with an objective to:

- To identify potential environmental and social impacts on specific construction sites;
- To determine enhancement and appropriate mitigation measures for activities with positive and adverse impacts;
- To identify the social and environmental parameters to be monitored during the construction and subsequent operation and maintenance of the irrigation schemes.

### 4.3 Methodology

The screening process involved both desk appraisal and site-specific screening in consultation with the communities to single out the possible social and environmental

issues that might be experienced during the construction of the works. This facilitated the identification of potential environmental and social impacts, determination of their significance and proposals on appropriate mitigation measures.

#### 4.4 Land Access and Management

Under the proposed interventions, there will be no land acquisition as there will be no activities that will be undertaken on private property hence no resettlement of people (including those whose livelihood is land-based) is anticipated. The proposed interventions are actually meant to protect the communities and their livelihoods from the effects of natural hazards. The construction company(ies) will have to ensure that:-

- (i) Trespassing on private land by contractor's workers or machinery will only be done upon being granted consent by the land owners,
- (ii) Extraction of construction materials on or off site will be done upon the land owner granting consent,
- (iii) The targeted area will be developed as a block and the beneficiaries will be responsible for plot allocation among themselves

## 5. ENVIRONMENTAL AND SOCIAL IMPACTS

### 5.1 Generic Environmental and Social Impacts

The environmental and social impact assessment conducted on proposed construction project sites shows that the activities of the project will cause some significant positive and negative environmental and social impacts. A summary of the positive and the negative impacts is as outlined below:

#### 5.1.1 Generic Social Positive impacts

- Skills transfer to local community and the construction sector
- Increased disposable income in the project area due to wages
- Spillover effects to local business community due to presence of the contractor
- Improved food security and sustainable income during the operation phase



**Luckson Ngalu, UNDP Engineer**

#### 5.1.2 Generic Social Negative impacts

- Occupational safety and health risks to the workers and the public at large
- Risk of increased incidences of Sexually Transmitted Infections (STIs) and HIV/AIDS
- Land degradation due to creation of borrow pits
- Noise pollution and risk of water pollution
- Conflicts due to competition for resources **Luckson Ngalu, UNDP Engineer**
- Obstruction of foot paths
- Risk of Gender-based violence (GBV), Sexual exploitation and assault



#### 5.1.3 Generic Environmental Positive impacts

- Significant contribution to climate change mitigation through carbon sequestration by irrigated crops
- Raising groundwater table due to irrigation and detained water
- Irrigation is an economic activity that provides an alternation source of livelihoods and save the forests from being destroyed

#### 5.1.4 Generic Environmental Negative impacts

- Loss of vegetation as clearing of the land might involve cutting down special species of trees
- Generation of wastes as most workers will be disposing fecal and other wastes on daily basis
- Soil erosion of loosened material due to movement of heavy trucks
- Dust emission and air pollution caused by movement of heavy trucks
- Risk of water pollution from petrochemicals and domestic waste

### 5.2 Environmental and Social Impact Mitigation Measures at Construction Phase

#### 5.2.1 Loss of vegetation

Wanton cutting down of trees will only happen where it is necessary to do so but in addition, tree planting and enhancing of natural regeneration of indigenous trees

#### 5.2.2 Accumulation of wastes

The contractor shall provide enough waste bins on site so that all the solid wastes can be dumped-in and be disposed of at a designated dumpsite. The contractor shall also provide a pit latrine on site for use by the workers

#### 5.2.3 Soil erosion and dust emission

To prevent any further soil erosion, the contractor be require to clear only the land in those places where construction will take place. The contractor will have to sprinkle water or reduce speed of trucks delivering materials on site

**Luckson Ngalu**



#### 5.2.5 Risk of water and air pollution

To minimize water pollution and contamination from machinery fuels and oils, the contractor will ensure that vehicles and machinery are well maintained and that the fuels/oils or any other waste are properly disposed of away from watercourses. The contractor will minimize dust emission by sprinkling water or reducing speed

#### 5.2.6 Occupational health and safety of workers and the public

The contractor will have to develop an Occupational Health and Safety approach, which aims to avoid, minimize and mitigate the risk of work place accidents. This would include identifying potential risks and the corresponding safe working practices, using only trained workers, using safe machinery and equipment and providing necessary personal protective equipment (PPE). The contractor shall ensure that a first aid kit is available on site including all the sanitary requirements in compliance with covid-19 prevention measures.

#### 5.2.7 Spread of HIV/AIDS and other Sexually Transmitted Infections (STIs)

Contractor's workers are predominantly men who travel away from their families during the construction period hence prone to engaging in promiscuity that might lead to transmission of HIV/AIDS including other STIs. Mitigation measures include sensitization on HIV and AIDS, distribution of condoms and awareness campaigns on HIV prevention.

#### 5.2.8 Land degradation due to creation of borrow pits

Where Contractor is mining gravel or sand to be used for the construction works, it is mandatory that the borrow pits created from excavation be filled or properly shaped upon completion of the works. The above applies regardless of the location of the excavation, as it is not limited to onsite excavation but wherever the contractor has excavated.

#### 5.2.9 Risk of competing for resources

The contractor and communities may compete for resources on the ground thereby creating unnecessary tension. To avoid this, community engagement will involve introducing the contractor to the community and establishing a continued engagement platform where the two groups can discuss and resolve any differences that may arise.

#### 5.2.10 Obstruction of foot paths

The project does not anticipate obstruction of existing footpaths but in the event of its occurrence, the community will be informed and the contractor shall identify an alternative.

#### 5.2.11 Gender-based violence (GBV) and sexual exploitation and assault (SEA)

We expect that the contractor will source most of labour locally hence, the risk of GBV related incidents is likely to be low. However, as a precautionary measure the contractor will sensitize the workers and have a contractor's code of conduct to be signed by workers.

### 5.3 Environmental and Social Management and Monitoring Plan (ESMMP)

During the implementation of the project, the Environmental and Social Management and Monitoring Plan will be a vital tool to ensure that implementation of the mitigation measures prescribed in the management plan are taking place. The environmental and social monitoring during the construction phase, for example, will comprise of two activities:-

- a) Review of Contractor's plans, methods statement, temporary works design and arrangements to ensure that environmental and social protection measures are adopted
- b) Systematic observation of all site activities and the contractor's offsite facilities to ensure compliance with contract requirements relating to environmental and social matters





**UNDP Engineer**

**Luckson Ngalu,**

**Table 1: Generic Environmental and Social Management and Monitoring Plan for Flood Mitigation Works**

<b>Expected Environmental/Social impacts</b>	<b>Proposed Mitigation/enhancement Measures</b>	<b>Output indicators</b>	<b>Target</b>	<b>Responsibility for implementing Mitigation Measures</b>	<b>Responsibility for monitoring the implementation of Mitigation Measures</b>	<b>Date of implementation</b>	<b>Required inputs</b>
Loss of trees and shrubs	Minimize clearing of site; Planting trees	No. of trees planted	60	Community	District Council	Onset of construction works	Seedlings, shovels, water canes, tubes
Soil erosion and dust emission	Minimize clearing of site; sprinkle water	Area cleared	TBA	Contractor	District Council	Onset of construction works	Supervision fuel
Domestic waste	Provision of pit latrines for workers	Workers pit latrines	2 (for ladies & gents)	Contractor	District Council	Onset of construction works	Building materials
Spread of HIV/AIDS and other STIs	1. Distribution of condoms HIV/AIDS	No. of condoms distributed	300	Health Centre Staff (i.e. HSA)	District Council	Onset of project	Condoms, gloves, fuel, Lunch allowance
	2. Awareness meetings	No. of meetings conducted	5	Health Centre Staff (i.e. HSA)	District Council	Onset of construction works	Condoms, gloves, fuel, Lunch allowance
GBV	Awareness meetings	No. of meeting conducted	5	GVH / CPW, HSA	GVH, VDC chairperson	Onset of project	Fuel, Lunch allowance
Community health and safety	Awareness meetings; speed limits & humps	Community meetings, sign posts	TBA	Contractor, PMC	District Council	Onset of construction works	Fuel, Lunch allowance
Water pollution	Avoid disposal of petrochemicals in waterways	Designated sites for oils disposal	TBA	Contractors	District council	Onset of construction works	Fuel, Lunch allowance

Luckson Ngalu, UNDP Engineer

