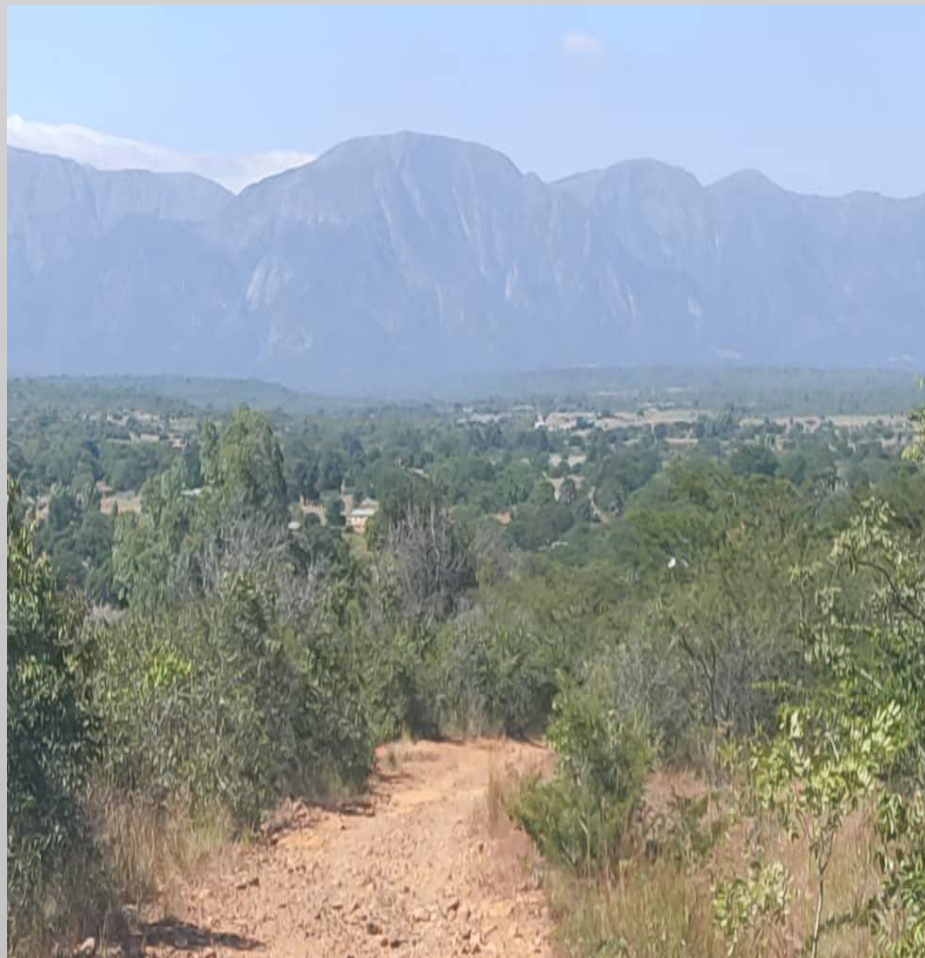


**SUSTAINABLE LUANGWA: SECURING  
LUANGWA'S WATER RESOURCES FOR  
SHARED SOCIOECONOMIC AND  
ENVIRONMENTAL BENEFITS THROUGH  
INTEGRATED CATCHMENT MANAGEMENT**  
WWF GEF ID: G0022 / GEF PROJECT ID: 10412.

# ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK AND PROCESS FRAMEWORK



7/20/2021

**Acknowledgements:**

The development of the Environmental and Social Management Framework and Process Framework (ESMF and PF) safeguards document for the Sustainable Luangwa: Securing Luangwa's water resources for shared socioeconomic and environmental benefits through integrated catchment management document was compiled by Morgan Katati, Environmental Social Safeguards Specialist from Zambia Institute of Environmental Management with support from the Project Development Team, comprising of members from (WWF-US), Ms. Astrid Breuer and Ms. Erika Drazen, (WWF-Zambia) Ms. Agness Musutu, (Government of the Republic of Zambia- Environment Department) Mr. Lazarous Sichone and Ms. Mayando Kanyata, (Lead consultant) Crawford Prentice, (National Consultant) Deuteronomy Kasaro and (Gender Consultant) Patricia Mukumbuta.

The Project Development Team is grateful to the offices of the Permanent Secretary Muchinga Province, the office of the District Commissioner Mafinga, the Council Secretary Mafinga, the traditional leaders, Chief Mwenechifungwe, and Chief Mweniwisi of Mafinga district, councilors, ward development committees and all individuals that took time to meet with the Project Development Team. This enabled the team to collect information with respect to safeguard actions aimed at mitigating identified social and environmental risks through the implementation process of the Sustainable Luangwa project.

Finally, we would like to acknowledge the support of the Global Environment Facility (GEF) and the World Wide Fund for Nature for providing funds for logistical support and for oversight of this mission.

## EXECUTIVE SUMMARY

**Sustainable Luangwa:** Securing Luangwa’s water resources for shared socioeconomic and environmental benefits through integrated catchment management.

This Environmental and Social Management Framework (ESMF) and Process Framework (PF) for Sustainable Luangwa Project provides an institutional mechanism to manage the environmental, cultural and social risks of the project. It will help to deliver better conservation outcomes and enhance the social well-being of local communities or project affected people in the project area. The safeguards framework is designed to address a broad range of environmental and social risks based on different challenges and needs of the communities in the project area. It systematizes good governance practices to achieve human rights, transparency, nondiscrimination, public participation, and accountability, among other goals.

This document therefore outlines the principles, procedures, and mitigation measures for addressing environmental and social impact associated with the Sustainable Luangwa Project, in accordance with the laws and regulations of Zambia and WWF’s Environment and Social Safeguards Integrated Policies and Procedures (SIPP).

The project focuses on the Upper Sub-catchment of the Luangwa River in north-eastern Zambia, in order to ensure the long-term security of water flow and quality of the Luangwa River and its associated downstream ecosystems and ecosystem services. The rich forest habitats of the headwaters provide rural communities with critical ecosystem goods and services, including fuel-wood and non-timber forest products (NTFPs).

### **Description of the Project Area**

The Luangwa River is 850 km long, one of the major tributaries of the Zambezi River, and is one of the four major rivers of the country. It is a free-flowing river where ecosystem functions and services are largely unaffected by changes to the fluvial connectivity allowing an unobstructed exchange of material, species and energy within the river system and surrounding landscapes. The freshwater supports many of the most diverse, complex and dynamic ecosystems, providing important societal and economic services.

The Luangwa Catchment has globally important biodiversity assets and natural resources: the Luangwa Floodplains Ramsar Site, six National Parks, eight Game Management Areas, and a number of National Forest Reserves (NFR). The high diversity of agricultural crops includes maize, groundnuts, cassava, cotton, millet, sorghum, tobacco and livestock-based system. Communities practice slash and burn agriculture and use wood for fish processing and tobacco curing. There are small hydropower power stations (Mulungushi (16MW), Lusemfwa (18MW) and Lusiwasi (4MW)). The key threats to the water resources are watershed degradation due to crop field expansion, river siltation due to watershed degradation, intensified charcoal production as well as high poverty levels.

**Project Categorization:** Sustainable Luangwa project is classified as a category B project under the WWF Environmental and Social Safeguards Categorization. Category B projects are Medium-risk projects that have potential adverse social and/or environmental impacts, and which require the development of a mitigation plan in accordance with the safeguards framework to address these.

### **Objective of the Environmental and Social Management Framework (ESMF)**

The preparation of the ESMF was done in accordance with the WWF’s ESSF in order to identify and manage the environmental and social impact associated with Sustainable Luangwa Project activities. The framework

outlines the principles, procedures, and mitigation measures for addressing environmental and social impact associated with the project, in accordance with the laws and regulations of Zambia and WWF SIPP. The ESMF is necessary to set out procedures for addressing potential adverse environmental and social impact that may occur during the implementation of project activities.

### **Objective of the Process Framework (PF)**

The Project triggers the WWF's Standard on Restriction of Access and Resettlement as it may restrict or otherwise affect access to natural resources in Mafinga Hills National Forest Reserve (NFR) and the livelihood activities particularly along the banks of the Luangwa River and its tributaries. The Process Framework (PF) describes the process by which affected communities participate in identification, design, implementation and monitoring of relevant project activities and mitigation measures. The purpose of PF is to ensure participation of Project Affected People do not become worse off as a result of the project, but rather ensure recognition and promotion of their interest. As the project intends to provide support for strengthening market linkages for agricultural products through existing social enterprises, the allocation of project benefits among local community members is particularly important. The intent of the framework is to ensure transparency and equity in the planning and implementation of activities by the project. The framework details the principles that become the bedrock for ensuring that mitigation of any negative impacts from project investments is through a participatory process involving affected stakeholders. It also ensures that any desired changes in the ways in which local communities exercise customary tenure rights in the project sites would not be imposed, but should emerge from a consultative process.

### **ESMF/PF Preparation Methodology**

The ESMF/PF was prepared on the basis of:

a) desk review of Zambian Policies, Laws and Regulations and WWF's safeguards standards, that requires that any potentially adverse environmental and social impacts are identified, avoided or mitigated. The following Safeguards policies relevant to Sustainable Luangwa project were reviewed: i) Standard on Environmental and Social Risk Management, ii) Standard on Protection of Natural Habitats, iii) Standard on Restriction of Access and Resettlement, iv) Standard on Indigenous People, v) Standard on Community Health, Safety and Security, vi) Standard on Cultural Resources, vii) Standard on Accountability and Grievance System, viii) Standard on Pest Management, ix) Standard on Public Consultation and Disclosure, and x) Standard on Stakeholder Engagement.

b) The ESMF/PF also draws on the community engagement and consultation results through Focus Group Discussions that were held in Maliko, Damascus, Mulekatembo and Thendele with different community members at village level. The project is being executed by the Ministry of Green Economy and Environment. Therefore, sector specific policies, Laws and regulations related to project objectives apply to govern the outcomes and outputs to safeguard project affected people in the area. Also, the WWF SIPP applies because WWF is the Implementing Agency for the Sustainable Luangwa project.

Vulnerability: Major vulnerable groups in both areas include women (widows, pregnant women) disabled, youth, children (including orphans), poor households, female headed households, elderly persons and other tribes. Their source of vulnerability is mainly gender, age, disability, illness, lack of income and resources, unemployment, and itinerant lifestyle.

General stakeholder engagement measures are outlined in the project's Stakeholder Engagement Plan (SEP). The SEP measures how the project affected communities should be engaged in advance of the implementation of each activity, and that their interests, entitlements, and livelihoods are not negatively

affected. If environmental and social safeguards screening reveal adverse impacts that may result in project activities, a community consultation should be organized in advance of the implementation of such activities. In order to mitigate its adverse impacts, activities that result in restriction or loss of tenure rights should trigger the development of site-specific Environmental Safeguards Management Plan (ESMP) or Livelihood Restoration Plan (LRP). Community members that should be engaged through consultations are those who, as a direct consequence of an activity or subproject would, without their informed consent or power of choice either: (a) lose their assets or access to assets or access to community and natural resources, or (b) lose a source of income or means of livelihood, whether or not they physically relocate to another place. Vulnerable and marginalized groups should be actively engaged in project-related consultations. These groups include: women (especially widows and female-headed households), youths, disabled individuals, elderly (especially single-headed households). For the community engagement process to be as inclusive as possible, it is important to use as many avenues as possible to inform all stakeholders through advertisements, national radio and television etc. Specific recommendations and guidelines on engagement methods are provided in the SEP which is developed separately.

### **Environmental and Social Policy, Regulations and Guidelines**

This section outlines policies, laws and regulations of Zambia and the WWF SIPP that are applicable to the project, and then discusses gaps between Zambia laws and regulations and the SIPP. For the purposes of the Sustainable Luangwa implementations, the principles and procedures of the SIPP shall prevail in all cases of discrepancies.

### **Overall Project ESS Risks**

Amongst the potential risks identified in the project area are:

- 1) Conflict Sensitivity: Land and resource tenure rights, preserved to be at risk during the land boundary demarcation and beacon setting, access to natural resources and community landscape management plans and conservation agreements risking being politicized without consultative process on land tenure rights.
- 2) Elite Capture Risks: Designation and management of conservation areas risking of elite capture, inequitable benefits; risks related to protection of natural habitat, land degradation and negative impacts on the natural habitat.
- 3) Capacity to claim community rights: Risks were identified with local communities affected by the project being unaware of their rights and/or lacking the capacity to claim them.

The corresponding mitigation measures for the overall project ESS risks have been outlined in this ESMF.

### **Grievance redress**

Sustainable Luangwa's GRM will be administered by the PMU. The Safeguards & Monitoring, Evaluation and Learning Officer will be in charge of the operation of the GRM at the PMU, responsible for collecting and processing grievances that address activities in project areas. Guidelines for the GRM operation are outlined in this ESMF and the SEP.

### **Disclosure**

All affected communities and relevant stakeholders shall be informed on the ESMF requirements and commitments in line with the outlined ESMF. The ESMF has been prepared in consultation with affected communities during the scoping mission in Mafinga and shall be disclosed to all stakeholders prior and during

the project implementation. Activity-specific ESMPs will be developed and disclosed during project implementation as needed.

### **Budget**

The EMSF implementation costs, including all costs related to compensation to project affected people, will be fully covered from the project budget. It will be responsibility of the National Steering Committee and the PMU to ensure that sufficient budget is available for all activity-specific mitigation measures that may be required in compliance with the EMSF. The principles and procedures of the ESMF apply only to project activities that are funded through GEF. In general, the anticipated adverse environmental and social impacts on the communities that resides within the project affected area and site-specific risks/impacts mitigated.

### **Guidelines for the ESMP Development**

The ESMP describes adverse environmental and social impact that are expected to occur as a result of the specific project activity, outlines concrete measures that should be undertaken to avoid or mitigate these impacts, and specify the implementation arrangements for administering these measures including institutions structures, roles, communication, consultations, and reporting procedures.

### **Monitoring**

The compliance of Sustainable Luangwa activities with the ESMF will be thoroughly monitored at different stages of implementation.

Monitoring at the project level: The overall responsibility for implementing the ESMF and for monitoring compliance with the Project's environmental safeguard activities lies with the PMU. The Safeguards & Monitoring, Evaluation and Learning Officer procured by the PMU shall oversee the implementation of all field activities and ensure their compliance with the ESMF. The Safeguards & Monitoring, Evaluation and Learning Officer shall monitor the project grievance redress mechanism (GRM) and access its effectiveness (i.e., to what extent grievances are resolved in an expeditious and satisfactory manner). The Officer will be responsible for reporting on overall safeguards compliance to the Sustainable Luangwa PMU project manager, the National Steering Committee, and WWF GEF Agency.

Monitoring at the GEF implementing agency level: WWF as the project's implementing agency, Ministry of Green Economy and Environment<sup>1</sup> as the executing agency and chair of the National Steering Committee, are responsible to oversee compliance with the ESMF.

---

<sup>1</sup> Following elections held in August 2021, and in accordance with the government gazette notice No. 1123 of 2021 on the statutory functions, portfolios and composition of government, the Environmental Management Department previously under the Ministry of Environmental Management Department (EMD) under the Ministry of Water Development, Sanitation and Environmental Protection (MWDSEP) is moving under the Ministry of Green Economy and Environment at the time of submission of the ESMF (October 2021). Everywhere MWDSEP is listed in the document is now the Ministry of Water Development and Sanitation (MWDS). The Ministry of Green Economy and Environment will replace MWDSEP as Lead Executing Entity for the project.

Contents

EXECUTIVE SUMMARY ..... 1

1. INTRODUCTION ..... 3

2. PROJECT DESCRIPTION ..... 5

3. PROJECT AREA PROFILE ..... 14

4. ENVIRONMENTAL AND SOCIAL POLICY REGULATIONS AND GUIDELINES ..... 22

5. PROJECT INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS ..... 59

6. ANTICIPATED ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES ..... 66

7. PROCEDURES FOR THE IDENTIFICATION AND MANAGEMENT OF ENVIRONMENTAL AND SOCIAL IMPACTS  
..... 82

8. PROCESS FRAMEWORK IN RELATION TO ACCESS RESTRICTION ..... 83

9. MONITORING ..... 87

10. GRIEVANCE REDRESS ..... 87

11. DISCLOSURE ..... 93

12. BUDGET ..... 93

ANNEX 1: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION MECHANISM FOR WATER POLICY 2010 ..... 0

ANNEX 2: ESS QUESTIONNAIRE ..... 3

**LIST OF ACRONYMS**

CBD.....Convention on Biological Diversity

CBNRM.....Community Based Natural Resource Management

CFMG.....Community Forest Management Group

CITES.....Convention on International Trade in Endangered Species of Wild Fauna and Flora

COMACO.....Community Markets for Conservation

CA.....Conservation Agriculture

CSO.....Civil Society Organization

EA.....Executing Agency

EMD.....Environmental Management Department

ESMF.....Environmental and Social Management Framework

ESMP.....Environmental and Social Mitigation Plan

ESS.....Environmental and Social Safeguards

ESSF.....Environmental and Social Safeguards Framework

FD.....Forest Department

GDP.....Gross Domestic Product

GEF.....Global Environment Facility

GESI.....Gender Equality and Social Inclusion

GMA.....Game Management Area

GRZ.....Government Republic of Zambia

HH.....Households

LRP.....Livelihood Restoration Plan

MEA.....Multilateral Environmental Agreements

M&E.....Monitoring and Evaluation

MoGEE.....Ministry of Green Economy and Environment

MWDSEP.....Ministry of Water Development, Sanitation and Environmental Protection

NDP.....National Development Plan

NFR.....National Forest Reserve

NGO.....Non-Governmental Organization

NTFP.....Non-timber Forest Product



PA.....	Protected Area
PAP.....	Project Affected People
PF.....	Process Framework
PIR.....	Project Implementation Report
PMU.....	Project Management Unit
PPG.....	Project Preparation Grant (for GEF)
PSC.....	Project Steering Committee
SA.....	Social Assessment
SCRALA.....	Strengthening Climate Resilience for Agriculture Livelihood in Agro ecological Region I & II
SFM.....	Sustainable Forest Management
SIPP.....	Safeguards Integrated Policies and Procedures
SLM.....	Sustainable Land Management
TOC.....	Theory of Change
TOR.....	Terms of Reference
TRALARD.....	Transforming Landscapes for Resilience and Development Project
UNCCD.....	United Nations Convention to Combat Desertification
UNFCCC.....	United Nations Framework Convention on Climate Change
WARMA.....	Water Resource Management Authority
WECSZ.....	Wildlife and Environmental Conservation Society of Zambia
WRPA.....	Water Resource Protection Area
WWF.....	World Wildlife Fund
ZIEM.....	Zambia Institute of Environmental Management

## 1. INTRODUCTION

Sustainable Luangwa project aims to ensure the long-term security of water flow and quality of the Luangwa River and its associated downstream ecosystems and ecosystem services. The project further seeks to address barriers to protection of the Luangwa River source through reduced forest and land degradation of the Luangwa Upper Sub-catchment in Mafinga District for enhanced protection of water resources, biodiversity and associated community livelihoods.

The Luangwa River stretches 850 km long from Mafinga Hills in Northern Zambia and is one of the major tributaries of the Zambezi River and one of the four major rivers in Zambia. It remains one of the last major free-flowing rivers in Zambia and is one of the longest unaltered river systems in southern Africa. Over 1.8 million people reside in the Luangwa Catchment, providing water for irrigated agriculture, household use and hydropower in the downstream of the catchment. The Luangwa Catchment has important biodiversity assets and natural resources such as: The Luangwa Floodplains Ramsar Site, National Parks, Game Management Areas (GMA), and National Forest Reserves (NFR) covering 68,812 km<sup>2</sup> which is roughly 50% of the total catchment area. The Luangwa River source is particularly affected by factors such as unsustainable agricultural practices, erosion of the inherently erodible soils in the sub-catchment and siltation of waterways. The degradation and loss of forest in the Luangwa headwaters threatens biodiversity, reduces water quality and flow, and impacts the associated ecosystem services to downstream populations.

The Mafinga Hills NFR is rich in biodiversity and forms part of the Eastern Afromontane biodiversity hotspot. Due to their rich variety of endemic flora and fauna, the Mafinga Hills, in which the NFR is located, is a Key Biodiversity Area. Currently, Mafinga Hills NFR is facing unsustainable forest harvesting mostly by communities living within the reserve and its surrounding areas, while the forests of the headwaters remain unprotected through shifting cultivations<sup>2</sup> agricultural extensification, wood collection for fuelwood, charcoal, uncontrolled bush fires and livestock grazing.

The Sustainable Luangwa project seeks to address barriers to protection of the Luangwa River source through reduced forest loss and land degradation of the Luangwa Upper Sub-catchment in Mafinga District, for enhanced protection of water resources, biodiversity and associated community livelihoods. The project has three key components: 1) Protected area management and establishment in the Luangwa headwaters; 2) Community management of the upper Luangwa Sub-Catchment and 3) Knowledge management and Monitoring and Evaluation (M&E).

The Government of the Republic of Zambia (GRZ) through the Ministry of Green Economy and Environment (MoGEE) is the Lead Executing Agency in coordination with WWF-Zambia. World Wildlife Fund (WWF-US) was designated by GRZ as the Implementing Agency (IA). The project will be executed in Mafinga District at the source of the Luangwa River targeting Mafinga Hills NFR and surrounding areas of Musipizi, Ntonga, Mafinga and Nsenje Wards.

In order to ensure environmental and social concerns are integrated into project design document (ProDoc), safeguards forms an integral part of the project activities. In context of policies, laws and regulations of Zambia, WWF's Safeguards Integrated Policies and Procedures (SIPP) applicable to the project requires the preparation of an Environmental and Social Management Framework (ESMF) and a Process Framework (PF).

---

<sup>2</sup> Shifting cultivation involves the use of fire, forest and land clearance and is traditionally practiced in northern Zambia.

The idea is to avoid (or minimize) adverse environmental and social impacts, and to enhance positive impacts of the project (Do good).

**The principles and procedures of the ESMF/PF apply to project activities funded through the GEF.**

The anticipated adverse environmental and social impact on the communities that reside within the project affected areas are site specific, reversible and can be mitigated. Thus, Sustainable Luangwa is classified as “**Category B project**” under the WWF environmental and social safeguards categorizations.

**1.1 Objectives of the Environmental Social Management Framework (ESMF) and Process Framework (PF)**

**Environmental Social Management Framework (ESMF)**

The ESMF aims to outline the safeguards principles, and mitigation measures for addressing environmental and social risks associated with the project in accordance with Policies, Laws and Regulations of Zambia and WWF’s Environmental and Social Safeguards Framework (ESSF) as detailed in the SIPP<sup>3</sup>. The proposed mitigation measures in the Environmental and Social Management Framework have been integrated into the project budget and will be implemented together with other activities of the project. An ESMF is necessary to set out procedures for addressing potential adverse social and environmental impacts that may occur during project implementation.

The specific objectives of the ESMF include the following:

- Carry out a preliminary identification of the positive and negative social and environmental impacts and risks associated with the implementation of the project;
- Outline the legal and regulatory framework that is relevant to the project implementation;
- Specify appropriate roles and responsibilities of actors and parties involved in the ESMF implementation;
- Propose a set of preliminary recommendations and measures to mitigate any negative impacts and enhance positive impacts;
- Develop a screening and assessment methodology for potential activities, that will allow an environmental/ social risk classification and the identification of appropriate safeguards instruments;
- Set out procedures to establish mechanisms to monitor the implementation and efficacy of the proposed mitigation measures; and
- Outline requirements related to disclosure, grievance redress, capacity building activities and budget required for the implementation of the ESMF.

**Process Framework (PF)**

This Process Framework (PF) describes the process by which affected communities participate in identification, design, implementation and monitoring of relevant project activities and mitigation measures that may restrict access to natural resources and/or subsistence livelihoods. The purpose of this PF is to

---

<sup>3</sup> The ESSF is WWF’s standards, policies and procedures framework for safeguards. The SIPP is the WWF GEF Agency’s manual for Environmental and Social Safeguards procedures. For the purposes of this document, the WWF ESSF/SIPP will be used interchangeably.

ensure participation of project affected people (PAP) while recognizing and protecting their interests and ensuring that they do not become worse off as a result of the project. Specifically, the PF will:

- Describe activities that may involve new or more stringent restrictions on use of natural resources in the project area;
- Establish the mechanism through which the local communities can contribute to the project design, implementation, and monitoring;
- Identify the potential negative impacts of the restriction on the surrounding communities;
- Describe the grievance redress procedure or process for resolving disputes to natural resource use and access restrictions as well as resource tenure rights; and
- Describe the participatory monitoring arrangements community members.

The project intends to reduce forest and land degradation of the Luangwa Upper Sub-Catchment for enhanced protection of water resources, biodiversity and associated community livelihoods. The project targets approximately 2,500 community members as direct beneficiaries (50% women). The purpose of the framework is to ensure transparency and equity in the planning and implementation of activities. The PF details the principles and processes for assisting communities to identify and manage any potential negative impacts of the project activities. The activities around the Mafinga Hill NFR and the proposal to establish a Water Resource Protection Area (WRPA) may trigger the Standard on Access Restriction and Resettlement to or otherwise affect access to natural resources and their livelihood activities on the PAP. The PF will ensure the mitigation of any negative impacts from project investments through a participatory process involving the affected stakeholders. It also ensures that any desired changes by the communities in the ways in which local populations exercise customary tenure rights in the project sites would not be imposed, but should be managed through a consultative process.

## **1.2 ESMF/PF Preparation Methodology**

The ESMF/PF was prepared based on:

- a) Desk review of the WWF SIPP and Zambia's environmental and social assessment policies
- b) Consultations and focus group discussions were held in May and June 2021 with different stakeholders at province, district, ward and village levels (in Mafinga, Musipizi, Nsenje and Ntonga wards of Mafinga District).

The ESMF/PF draws on consultations results, on the mission report and on the relevant Policies, Laws and Regulations of the Republic of Zambia and WWF SIPP. ESMF and PF components are combined into a single document, in order to avoid duplications of frameworks and for ease of reference by the various document users.

## **2. PROJECT DESCRIPTION**

The project scope is the Luangwa Upper Sub-catchment, concentrated in Mafinga District, in Muchinga province. The Luangwa River originates in the Mafinga Hills of the Luangwa-Malawi watershed in the north-eastern part of Zambia and flows over a stretch of 850 km to the confluence with the Zambezi River in Luangwa District. Within Mafinga District, the project will focus on the source of the Luangwa River, given the

importance of the upper catchment to the long-term water flow and quality of the Luangwa River and associated stream ecosystems and ecosystem services. The Mafinga Hills NFR and the surrounding areas in Mafinga, Musipizi, Nsenje and Ntonga Wards of Mafinga District are part of the project area. The rich forest habitats of the headwaters provide rural communities with critical ecosystem goods and services, including wood fuel and non-timber forest products (NTFPs).

The Luangwa Catchment (Fig. 1) covers approximately 145,690.33 km<sup>2</sup> within Zambian territory and lies between latitudes 9°30" and 15°40" south, and between longitudes 28°00" and 33°45" east. Administratively it lies in five provinces, namely: Muchinga, Eastern, Central, Lusaka and Copperbelt. The catchment watershed forms the international boundary with Malawi to the east, and Mozambique and Zimbabwe to the south.

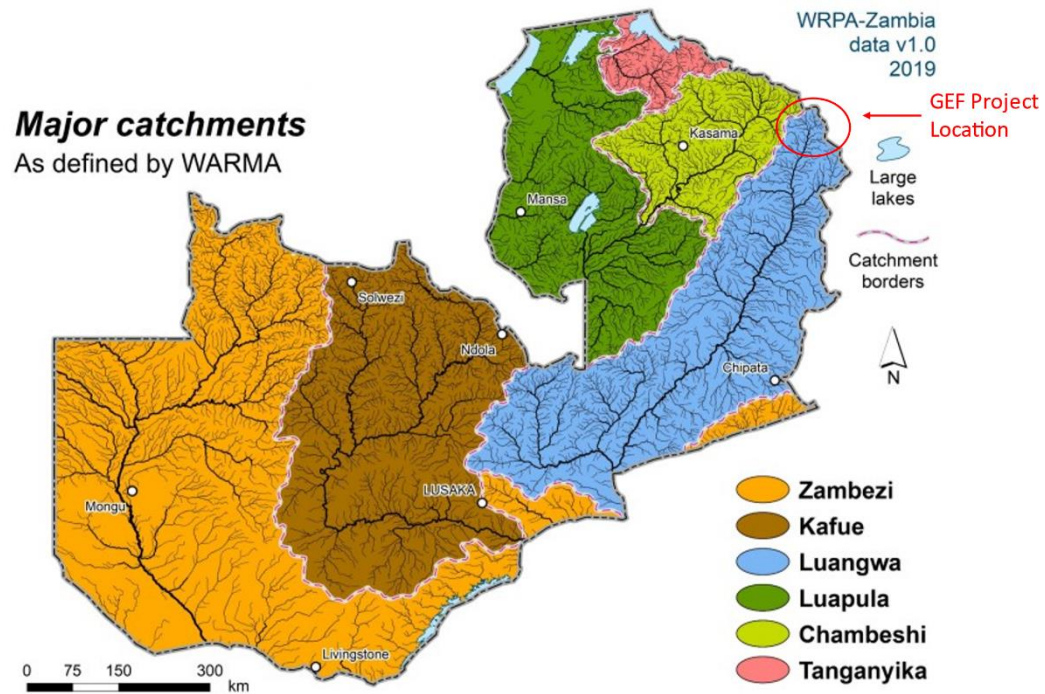


Figure 1. River systems of Zambia ranked by free-flowing river status and sediment load and concentration scores.

Source: <https://wrpa-zambia.weebly.com/data.html>

Specifically, the project will contribute to four GEF Core Indicators: i) 25,000 ha of terrestrial PAs created in the form of a new Water Resource Protection Area for the Luangwa headwaters, and 15,500 ha of the Mafinga Hills NFR under improved management for conservation and sustainable use; ii) 900 ha of forested land restored inside Mafinga Hills NFR; iii) 40,000 ha of the Luangwa headwaters under sustainable land management practices; and iv) approximately 2,500 community members as direct beneficiaries (50% women) and some 100 government staff (40% women) as a co-benefit of GEF investment.

## 2.1 Project Objective

The project objective is to reduce forest and land degradation of the Luangwa Upper Sub-Catchment for enhanced protection of water resources, biodiversity and associated community livelihoods.

## 2.2 Project Components

Over the five-year project period, the project objective will be achieved through the implementation of the following three components:

1. Protected area management and establishment in the Luangwa headwaters - **Component 1** will lead to improved participatory management of the key protected area within the headwaters, Mafinga Hills NFR, which includes important river source areas. It will also support the development and designation of a WRPA that will provide a model for improved protection and community-based management of the upper sub-catchment.
2. Community management of the upper Luangwa Sub-Catchment (Mafinga District) - **Component 2** will establish sustainable community management as well as environmentally sustainable and climate resilient livelihoods through prioritized interventions focused on the headwaters to reduce land and forest degradation that contribute towards the loss of biodiversity and ecosystem services.
3. Knowledge management and Monitoring and Evaluation - **Component 3** will ensure that the increased knowledge of sustainable catchment management from lessons learned and best practices supports replication of the approach in other headwater areas at local and national levels, as well as being disseminated at Zambezi River Basin level and globally. M&E will be carried out to inform project decision-making and adaptive management.

### **COMPONENT 1: Protected area management and establishment in the Luangwa headwaters**

***Outcome 1.1: Improved management effectiveness of Mafinga Hills National Forest Reserve in the Luangwa headwaters (Mafinga District).***

#### **Output 1.1.1: Boundary demarcation of Mafinga Hills NFR (with beacons)**

While the boundary of the Mafinga Hills NFR is largely known, its actual demarcation on the ground is needed for clear identification and to facilitate monitoring, patrolling and law enforcement. The indicative activities to support the demarcation of the 36.43 km boundary are as follows:

1. Constitute a team of technical staff consisting of Forestry Department staff and identify local community members to support boundary identification and demarcation
2. Prepare a communication plan for Component 1, prepare messages and conduct awareness raising/sensitization regarding the NFR and its boundaries among surrounding communities and other relevant stakeholders
3. Procure tools and equipment for boundary marking, including: GPS, measuring rods, materials for beacons, compass, axes, hoes, etc.
4. Carry out boundary demarcation works on the ground using beacons (including GIS and field observation work)
5. Produce digitized NFR boundary map(s) through a consultative process and submit to the Director of Forestry for approval
6. Conduct regular patrolling by Forestry Dept. staff and community forest volunteers, law enforcement and community outreach to secure the NFR boundaries

*Responsibility:* Managed by the PMU, with Forest Department (FD), related government departments and local community members

**Output 1.1.2: Participatory management plan for Mafinga Hills NFR developed and endorsed**

A management plan will be developed for Mafinga Hills NFR in collaboration with local communities, focusing on maintaining the supply of water from these critical watersheds. The management plan will focus on defining restrictions on land-use within the NFR, along with a set of actions that focus on conserving biodiversity, improving vegetation cover and removing potential sources of erosion and pollution that negatively impact the river source area. Consequently, the project will support a systematic approach for both the Mafinga Hills NFR (15,500 ha) and its surrounding communities. The indicative activities are as follows:

1. Conduct a workshop and meetings among local stakeholders regarding the participatory development process for the management plan for Mafinga Hills NFR and develop a methodology for carrying out forest, biodiversity and socio-economic assessments
2. Procure equipment for forest assessment and fire management, including: tools for measuring tree heights and diameters e.g. chronometers, a camera, diameter tapes/ caliper, dumpy level, etc.
3. Conduct participatory forest, biodiversity and socio-economic assessments, prepare the assessment reports and present them to the technical team and local stakeholders for review
4. Prepare a fire management plan as a component of Forest Management plan for the NFR in consultation with local communities, FD and related stakeholders
5. Develop the general forest management plan for the Mafinga Hills NFR including by-laws with local authorities based on the assessment reports and legislative documents, taking into account climate change resilience, gender mainstreaming and social and environmental safeguards considerations
6. Review of the draft general forest management plan by stakeholders at district, provincial and national level
7. Submit the final management plan to the Director of FD for approval
8. Implement the fire management plan which includes creating firebreaks around the NFR boundaries in cooperation with local communities

*Responsibility:* Managed by the PMU, with FD staff, related government department technical experts on forest management, biodiversity and socio-economic assessment, local stakeholders

**Output 1.1.3: Assisted regeneration of degraded forest and grassland areas undertaken through community engagement**

The activities under this Output will focus on degraded areas within the NFR as well as adjacent community lands where there is potential for habitat rehabilitation, primarily focusing on forest habitats but including

grassland where necessary. Rehabilitation activities will be participatory in order to engage and provide benefits to local communities<sup>4</sup>. Indicative activities are as follows:

1. Conduct an assessment to determine areas affected by habitat degradation
2. Develop a participatory action plan for assisted regeneration and grassland rehabilitation
3. Demarcate the area for assisted natural regeneration
4. Implement participatory action plan for assisted natural regeneration with support from communities
5. Conduct monitoring for the assisted regeneration areas as necessary

*Responsibility:* Managed by the PMU with FD/NFR staff and local communities

#### **Output 1.1.4: Training, capacity building and operational support for management of Mafinga Hills NFR and surrounding areas**

This Output aims to provide the support needed to establish effective patrolling and monitoring activities undertaken by field staff in Mafinga District. The targeted staff would include: PMU, and related government departments at district level. Indicative activities are as follows:

1. Conduct a field level training needs assessment for field staff
2. Train field staff in various field skills related to participatory natural resource management approaches, GIS/remote sensing, resource monitoring, etc.
3. Field staff conduct training activities for local communities involved in CBNRM
4. Procure and distribute key equipment needs, including motorcycles for patrolling, maintenance, field supplies and equipment

*Responsibility:* Managed by the PMU, and involving District level government staff and local communities

#### **Outcome 1.2: Enhanced protective status of the source of the Luangwa River**

##### **Output 1.2.1: Proposal prepared through a participatory process leading to gazettelement of the Luangwa headwaters as a Water Resource Protection Area (WRPA)**

Water Resource Protection Area (WRPA) proposal will be submitted to the WARMA Board for the Upper Sub-Catchment including: biological and physical survey results; outcomes from community consultations; boundary demarcation, restrictions and regulations. The design of the WRPA should take into account the need for effective management of forested lands around the Mafinga Hills NFR and its connectivity with Fungwe NFR immediately to the south. Once the area is defined and gazetted as a WRPA, it will legally be protected and receive protection status. The WRPA proposal will result in approximately 25,000 ha of protected area which will be decided through the participatory assessment process.

The indicative activities are as follows:

1. Conduct an awareness campaign for stakeholders on WRPA establishment in the targeted Wards. This will involve 8 months of radio programme aired in a year for three years.

---

<sup>4</sup> Note – Output 1.1.4 differs from 2.1.4 in that its primary aim is habitat rehabilitation, especially in and around Mafinga Hills NFR.



5. Conduct and prepare rapid assessment report including data and information collection and analysis of surface water infrastructure, land cover land use (LCLU) surveys, water resource/hydro-geomorphology, ecological and socio-economic assessments in the proposed area
6. Conduct consultations with local communities and other stakeholders to propose mutually agreed boundaries, restrictions and regulations of the WRPA
7. Develop draft WRPA protection plan taking into consideration recommendations from Environmental Management and Social Framework (EMSF), Process Framework (PF) and Gender Action Plan (GAP)
8. Conduct validation meetings for the WRPA protection plan including nature-based solutions plan with key stakeholders at district, provincial and national levels
9. Submit the proposal for declaration of a Water Resource Protection Area to the WARMA's Board for approval
10. Support the process of the Board submitting WRPA proposal and gazetting process by the Minister responsible for Water including preparation of policy brief for Minister on protection, stakeholder consultation report, preparation for the SI for protection, amongst other activities.
11. Demarcation of WRPA boundaries and signage and creation of buffer zones
12. Develop and implement nature-based solutions (ecosystem-based solutions) for restoration and protection of the WRPA
13. Implement and monitor WRPA protection plan with local stakeholders including Community Forestry Management Groups (established under Component 2 – Output 2.1.4). Monitoring will include citizen science work monitoring water quality at approximately 10 sites using test kits for selected parameters, supported by field visits for guidance.
14. Support Community Forestry Management Groups in the enforcement of WRPA protection plan.

Responsibility: Managed by the PMU, and involving relevant government authorities such as WARMA, MoGEE, and partners such as WWF Zambia

## **COMPONENT 2: Community management of the Upper Luangwa Sub-catchment (Mafinga District)**

***Outcome 2.1: Buffer zone and community lands under improved management to benefit biodiversity and ecosystem services in the Luangwa headwaters***

### **Output 2.1.1. Community landscape management plans and conservation agreements negotiated with local farmers and monitored**

This Output aims to put in place the plans and agreements required to implement a community-led approach towards sustainable land and forest management in the Upper Luangwa Sub-catchment outside existing protected areas. The implementation of conservation measures within the wider scope of these plans will be supported by community conservation agreements, to conserve a specific element of biodiversity.

1. Identify and engage existing community structures to take in community landscape management and conservation

2. Conduct awareness raising activities and build capacity of the identified community structures on potential community-based natural resource management areas and the PRA / PLUP processes to develop the planning framework
3. Identify key natural resource features (including natural habitats, food resources, aquatic resources) and their locations in the landscape, with community members through the PRA/PLUP process
4. Negotiate the desired vision for the landscape and outcomes and benefits with the local government, traditional leaders and communities through the PRA/PLUP process
5. Design participatory landscape management plans (PLMPs) based on the stakeholder negotiation feedback, and distribution and use of resources outside protected areas e.g., forestry, water, agriculture through the PRA/PLUP process
6. Support conservation measures within the wider scope of the PLMPs through the development and signing of community conservation agreements that link to project support for conservation agriculture, community forestry and other forms of livelihood support (see Outputs 2.1.2-4 below)
7. Monitor implementation of the PLMPs and community conservation agreements

*Responsibility:* PMU with technical support from relevant government departments, and partners such as WESCZ (for awareness and sensitization activities)

**Output 2.1.2. Key conservation agriculture actions by farmers around the Mafinga Hills NFR supported and linked to markets**

Conservation Agriculture (CA) practices will be supported by extension services from national experts and experienced service providers. The types of CA interventions used may include: crop intensification in suitable locations as a strategy to reduce expansion through clearing of natural habitats (as is currently practiced, representing the main local cause of deforestation). This will be supported by improving market linkages for agricultural products through existing social enterprises. Indicative activities are as follows:

1. Identify service providers and capacity development institutions
2. Conduct awareness and sensitization of targeted communities
3. Identify climate-resilient CA practices suitable for the specific conditions of the Mafinga area through consultation processes with local communities and agricultural experts
4. Support the implementation of selected CA practices through provision of TA, basic equipment (eg rubber boots, hoes, bicycles), seed, agricultural supplies, with specific attention to gender mainstreaming and the empowerment of women and within the framework of community conservation agreements developed in Output 2.1.1.
5. Conduct an assessment of potential markets and market linkages for CA products
6. Strengthen communication of agricultural market information, COVID situation reports and local weather forecasts via local radio broadcasts
7. Build capacity in communities on value chain development and develop market linkages for local communities or out grower scheme through a sub grant to potential partner

8. Provide livelihood support assistance where necessary through small community loans to cover any temporary reductions in income experienced as a result of the transition to conservation agriculture<sup>5</sup>
9. Monitor participation trends (including gender and social inclusion), productivity, profitability and economic sustainability of CA practices
10. Monitor the environmental impacts of CA practices, especially in relation to the use of local water resources and potential impacts on water quality

*Responsibility:* PMU with technical support from the Ministry of Agriculture and other relevant government departments, and partners such as COMACO

### **Output 2.1.3 Community woodlots and natural regeneration areas established to reduce forest loss from wood fuel gathering within Mafinga Hills NFR**

The collection of fuelwoods is a significant source of forest degradation and deforestation in Mafinga District. This Output aims to provide an alternative source of fuelwood through the establishment of community woodlots

Indicative activities are as follows:

1. Conduct an assessment of potential areas where forest resources have been significantly impacted by fuelwood collection (and other threats such as forest fires) and identify suitable communities to engage in demonstration activities
2. Conduct training of community members in the skills required for community woodlot development, tree nursery management, and assisted natural regeneration practices
3. Identify sites for community woodlots and degraded forest areas for natural regeneration and prepare an implementation plan through participatory consultations that take into account gender mainstreaming and social inclusion
4. Monitor and record natural regeneration and restoration areas and apply management measures including fire control, weeding, protection from grazing, etc .

*Responsibility:* PMU with technical support from Forest Department and other relevant government departments

### **Output 2.1.4 Participatory designation and management of community forest areas undertaken with communities outside Mafinga Hills NFR**

The Forests Act (2015) and CFM Regulations (2018) define a procedure for how members of a community, who derive their livelihood from a nearby forest, may apply for recognition by the Forestry Department as a community forest management group (CFMG). The project will support selected communities to follow all the necessary steps in this procedure, as well as the subsequent management of community forest areas. Areas under community forestry may fall within the proposed WRPA, providing communities with the right to manage these lands, water and forest resources. Indicative activities are as follows:

1. Conduct awareness-raising meetings for relevant communities on the process and benefits of establishing community forest areas

---

<sup>5</sup> See: <http://www.fao.org/3/cb0572en/cb0572en.pdf>

2. Identify 3 areas suitable for community forest establishment
3. Conduct a participatory problem analysis
4. Train communities in governance aspects of community forest management
5. Facilitate community elections for community forest management group members, including specific attention to gender mainstreaming and the empowerment of women
6. Apply for recognition as Community Forest Management Groups (CFMG)
7. Develop a Management Plan for each community forest area and seek approval from the Forestry Department
8. Sign a Community Forest Management Agreement

*Responsibility:* PMU with technical support from Forestry Department, with relevant government departments

### **COMPONENT 3: Knowledge management and Monitoring and Evaluation (M&E)**

***Outcome 3.1: Increased knowledge of sustainable catchment management supports replication of the project approach in other headwater areas***

**Output 3.1.1: Cross-sectoral communication strategy developed and implemented to support sustainable catchment management in headwater areas**

The project will demonstrate an integrated, community-based approach towards sustainable catchment management that embraces conservation agriculture, community forestry, biodiversity conservation and other disciplines.

Indicative activities include the following:

1. Identify the objectives of the communication strategy, its scope and stakeholders in line with the project Stakeholder Engagement Plan
2. Develop the main communication actions, messages and information materials needed to promote sustainable catchment management and its constituent parts
3. Identify suitable communications platforms for dissemination of information at different levels
4. Implement the communication strategy
5. Organize information exchange and visits for key stakeholders from other priority headwater areas in the Luangwa catchment to share lessons learned and promote uptake and replication of the project approach
6. Share lessons locally, regionally and internationally at Zambezi River basin level through various platforms and networks

*Responsibility:* PMU with support from Government Departments and Partners

**Output 3.1.2: Knowledge products designed and distributed to relevant stakeholders**

Project knowledge products will take diverse forms including technical reports, white papers, case studies.

Indicative activities include the following:

1. Identify, document and disseminate best practices and lessons from project activities through stakeholder consultations including guiding manuals for WRPA process;
2. Document and share traditional knowledge associated with natural resource management
3. Prepare videos and stories of project success stories - hire a media firm to produce at least three short videos on success stories.
4. Develop case studies and project technical reports, disseminated in electronic and printed formats, to discuss specific issues in greater depth;
5. Organize project technical reports, studies and articles and make them available through project-related website(s) and in other appropriate forms for targeted stakeholder groups

*Responsibility:* PMU with support from relevant government Departments and other partners

***Outcome 3.2: Informed and adaptive project management***

The project will build the capacity of project staff for effective project management at all levels of organization through establishment and sharing of clear procedures, orientation and training in line with WWF requirements as a GEF Project Agency.

**Output 3.2.1: Project M&E plan implemented and project progress reports, results framework, midterm evaluation and terminal evaluation used to inform adaptive management**

Output 3.2.1 will ensure adequate capacity for participatory and efficient monitoring and evaluation and adaptive management during project implementation. This will include the following indicative activities:

1. Training for project staff, clarification of stakeholder roles and planning processes at the Inception Workshops in Lusaka and Mafinga District, including training on WWF network standards, report writing, M&E reporting requirements, gender mainstreaming and social inclusion, and social and environmental safeguards;
2. Annual adaptive management review workshops at central and field levels to review progress and work plans;
3. Detailed planning for implementation including trimester review and planning sessions;
4. Annual and joint monitoring visits to field sites;
5. Safeguard monitoring visits;
6. Training and technical support for sub-grantees on participatory monitoring and evaluation;
7. WWF/GEF reporting including biannual Project Progress Reports (PPR) and the Project Closeout Report, annual work plan tracking, and annual Financial Progress Reports;
8. External mid-term and terminal evaluations and associated workshops plus a final project completion workshop for sharing lessons.

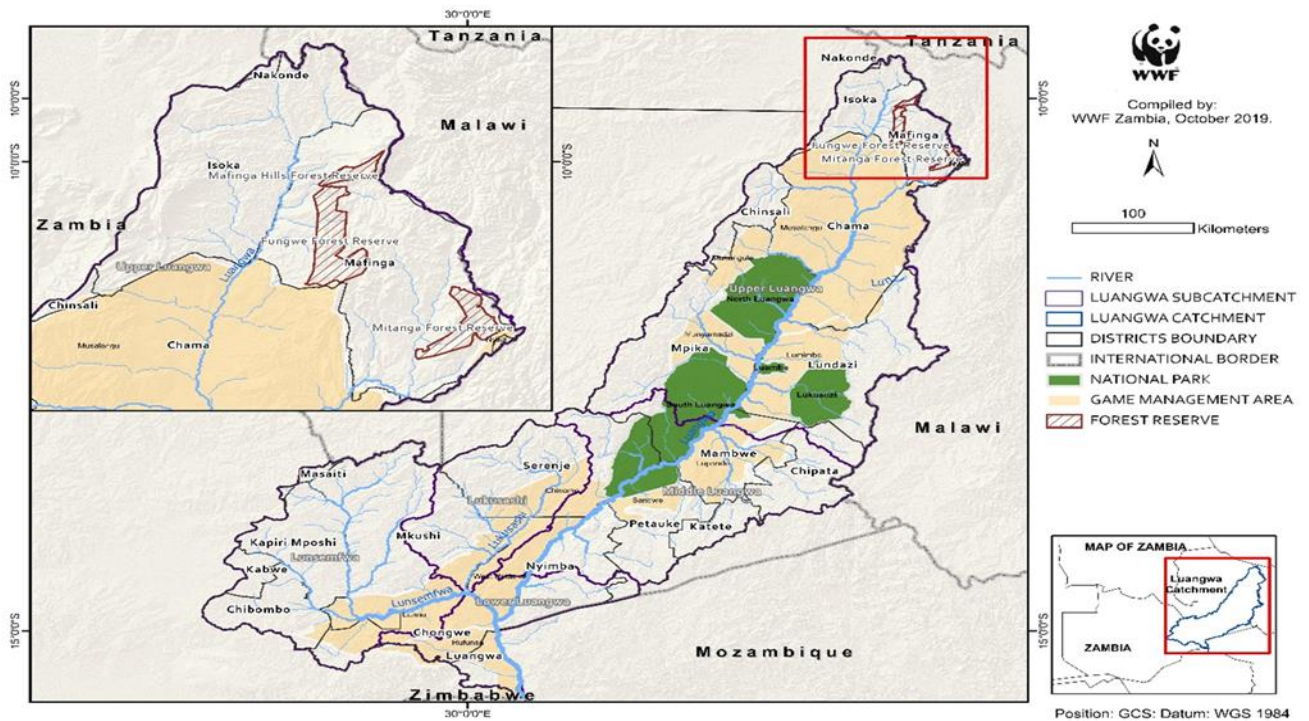
*Responsibility:* PMU with technical support from external consultants

## 3. PROJECT AREA PROFILE

### 3.1 Geographical Coverage

Mafinga District in Muchinga Province was created on 27th March, 2011 and was initially part of Isoka District and as Isoka East Constituency. The district has a land area of 4,134 km<sup>2</sup> and is situated in the east of Isoka district and 154 km away from Isoka administrative center and about 1,134 km from Lusaka, the capital city of Zambia. The district is located between Latitude of S10° 14'40.9" Longitude of E 033° 21'53.8". It borders with Isoka to the northwest, Chama District to the south and Malawi to the east.

Figure 2: Geographic Location of Mafinga District



Source: Field data, 2021

*Location of Mafinga and Characteristics of the Mountainous area*

Table 1. Location of the Mafinga Mountain

Location	Zambia. Northern
Central coordinates	33° 17.58' East 10° 0.00' South
Area of Mountain Range	23,000 ha
Attitude	1,200 – 2,200m

Mafinga has various perennial streams like Nsami, which are used for grazing and gardening. Some of the streams run throughout the year. Mafinga District is mainly mountainous and is classified into three physiographical zones. These are:

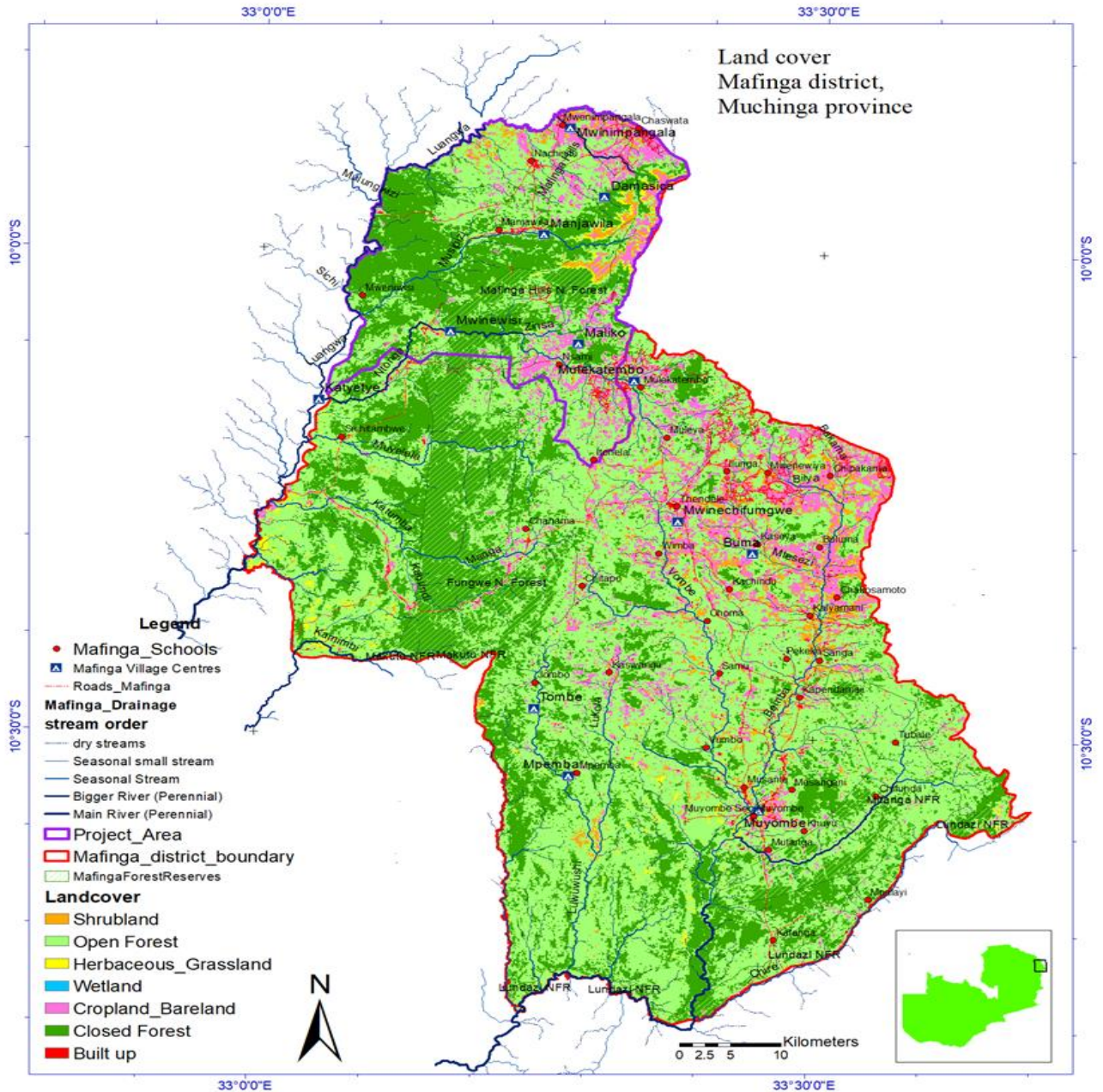
- The plateau East of Muchinga Escarpment

- The Luangwa Valley
- Hilly and flat land

### 3.2 Environmental Context and Baseline Conditions

#### *Physical Characteristics of the Landscape*

Figure 3. Land cover and physical characteristics of Muchinga District



Mafinga Hills are the most northerly block of mountains within Zambian Eastern highlands, they straddle the international boundary with Malawi as well as Mafinga National Forest (No. 296) in the South of the area, and the site encompasses all the land above the 1,500m contour, with some parts which are largely uninhabited and rarely visited. According to Geological Survey Department of Zambia, the Mafinga Hills are composed of quartzites, phyllites and field spathic sandstones of sedimentary origin.

#### *Annual Precipitation (Rainfall distribution)*

Mafinga is part of Region III, receives an annual average of 1,000-1,500mm of rainfall, constituting 46% of the country total landmass covering Copperbelt, Luapula, Northern and Muchinga Provinces. Annual rainfall records show that it has ranged between 838.1mm to 1274.0mm. The 2008/2009 rain season recorded the highest rainfall of 1274.0mm with a total of 84 rainy days. In the coolest months of May to July, the temperature goes as low as 6.5°C while in the hot season, it goes up to 35.9 °C.

#### *Vegetation (Flora)*

The vegetation consists mainly of hill Miombo woodland dominated by the *Brachystegia* species, where the forest cover and woodland has been cleared, the Miombo is inter-spaced with riverine forests and grassland. The Mafinga Hills are a botanically rich area, hosting at least eleven known endemic plant species namely *Buchnera crassifolia*, *Buchnera nitida*, *Cyphia mafingensis*, *Cyphostem mavollesenii*, *Dissotis lanata*, *Ocimum obovatum*, *Phyllanthus mafingensis*, *Polystachya mafingensis*, *Protea mafingensis* and *Rytigynia adenodonta*. They are also home to an interesting saurian endemic, the Nyika Dwarf Chameleon (*Chamaeleo goetzei nyikae*) and the Nyika Dwarf Toad (*Bufoleennbergi*).

The inaccessible hillsides and higher altitude areas consist mainly of undisturbed Miombo woodland dominated by *Brachystegia* and *Jubernadia* species. While previously cleared areas and valley bottom comprise a larger mix of tree species including *Pterocarpus angolensis* (Mukwa), *Parinari curatellifolia* (Mpundu), *Albizia gummifera*, *Prunus Africana*, *Nuxia congesta*, *Uapaca kirkiana*, and some remnant *Colophospermum mopane* (Mopane).

The remnant riverine forests (Mushitu) are dominated by *Syzygium* and *Ficus* species with key species such as *Ficus lutea*, *Prunus Africana*, *Syzygium guineense ssp. Afromontanum*, and *Syzygium cordatum*. Some cleared and floodplain areas along the streams, are dominated by shrubs and grassland with the main species comprising *Hyparrhenia rufa*, *Diheteropogan ampelactens*, *Londetia simplex* and *Cymbopogon* excavates with some areas of scattered bushes, trees and shrubs. The Mafinga Hills are known to host eleven known endemic plant species namely *Buchnera crassifolia*, *Buchnera nitida*, *Cyphia mafingensis*, *Cyphostemma vollesenii*, *Dissotis lanata*, *s Ocimum obovatum*, *Phyllanthus Mafingensis*, *Polystachya mafingensis*, *Polystanchya mafingensis*, *Protea kibarensis*, *Protea mafingensis* and *Rytigynia adenodonta*<sup>6</sup>.

#### *Mammals (Fauna)*

The Mafinga hills are also a biodiversity hotspot, still home to large mammals including the elusive leopard, spotted hyenas and yellow baboons<sup>7</sup>. Already documented mammals include checkered elephant shrew, and giant mastiff bat, smith's red rock hare, lesser pouched rat and Nyika bush-rat<sup>8</sup>. Klipspringers were reported

---

<sup>6</sup> Wildlife and Environmental conservation society of Zambia

<sup>7</sup> <https://www.weforest.org/project/mafinga-hills>

<sup>8</sup> Birdlife International, 2005



to be found in the area; mainly in the rain season. Habitat destruction is the leading threat to wildlife. However, bush meat and illegal hunting are also less threats, but minor ones. Almost all areas of animal population are reported to have decreased.

#### *Amphibians, Reptiles and Fishes*

The Mafinga Hills is a home to an interesting saurian endemic, the Nyika Dwarf Chameleon (*Chamaeleo goetzei nyikae*) and the Nyika Dwarf Toad (*Bufo loennbergi*). The Hills are said to be a habitat of diverse snake species, these remain unidentified and undocumented. At the time of this field survey, there were no reports on aquatic studies that may have been conducted in Mafinga.

#### *Birds*

According to the Birdlife International survey carried out in 2005, birds were seen during the survey which included the little bee-eater, sun bird, black backed Barbet, Violet-backed starling, Yellow Billed Kite and the Long Eared Glossy Starling. Other Birds reported to be found in the Mafinga include Yellow -throated Warbler, Silvery – cheeked Hornbills, Cabanis’ Greenbul, Rameron Pigeon, Cinnamon Dove, Bar-tailed Trogon, Moustached Green Tinker bird, Eastern Mountain Greenbul, Yellow-streaked Bulbul, Olive thrush, White-chested alethe, Chestnut – headed Apalis<sup>9</sup>.

#### *Invertebrates*

Butterflies have both been documented and were seen during the field survey. Documented butterflies include the possibly endemic *lolatus stewartia*, an isolated population of *pilodeudorix zelomima* and the very local *Lolaus pamela*<sup>10</sup>.

#### *Conservation Targets for Mafinga Hills*

The agriculture activities along the Headwaters of the Luangwa River are expanding into the marginal and fragile riverine forests at the headwaters of the Luangwa River and its major tributary drainages that include the Musipizi and Ntonga Rivers.

#### *The Mafinga Hills Heritage Sites*

The Mafinga hills are rich in Biodiversity Heritage. Part of the Mafinga Hills is a National Forest Reserve. This reserve is designated for the management of the Luangwa watershed and for the conservation of Mafinga Afromontane ecosystem and associated biodiversity. The Reserve borders the Mafinga Hills and is 15,500 hectares in size.

Heritage sites at the Mafinga Hills include Malungule Hot Spring. The hot spring is located close to chief Mwiniwisi’s palace in Kalao village. Malungule loosely translated means ‘to burn’ which is a reference to the supposed heating of the earth resulting in the hot spring. The area around the hot spring has closed canopy riverine forest and hill Miombo forest. The top of the hill over the hot spring has some escarpment Miombo with various succulents. The area around the hot spring is largely protected, mainly due to its reverence as a sacred area. A strong mythical belief permeates the community that there is a seven-headed snake’ that lives in the area and that the hot spring is where the snake’s active ‘head’ and ‘eye’ are located. This belief largely

---

<sup>9</sup> ibid.

<sup>10</sup> See Birdlife International, 2005 ibid

stops majority of community members from visiting the area or to have potentially damaging activities within the area, hence traditionally protected.

#### *Luangwa River and Associated Riparian Zone*

The Mafinga Hills is the source of the Luangwa River. The Luangwa River starts from the heart of the Mafinga Hills at an altitude of about 1,800m. The source has for a long time been preserved due to the high altitude and the roughness of the surrounding ridges. Luangwa is the main watershed that drains Mafinga district. There are three main tributaries which together with the Luangwa River forms the lifeline of the communities in Mafinga. The three tributaries are Musipizi, Ntonga and Inzinza Rivers. Some parts of the valley are dominated by the Mopani trees. Mafinga has a lot of streams originating from the Mafinga hills. Downstream, of the Luangwa River and its major tributaries are significantly degraded. Some of the major causes of the degradation include cultivation along the riverine area, and deforestation of riparian forests. This situation has resulted in sedimentation and poor water availability.

### **3.3 Social Baseline Conditions**

#### *Demography of Mafinga District*

Mafinga District has a projected population of 103,877 as at 2018. Of this population, 50,193 are male (representing 48.3%), while 53,684 are female (representing 51.7%) with an annual growth rate of 4.6%. The district has a total number of 12,648 households and a population density of 16.0/Km<sup>2</sup>. The total population in the project area is estimated at 23, 570. The population by ward and sex is summarised in Table 2 below:

**Table 2: Estimated Project Area Population and Households by Ward, Disaggregated by Gender**

Wards	Population				
	Total	Female	Male	% Female	% Male
Mafinga	5,966	3,067	2,899	51%	49%
Musipizi	6,024	3,440	2,584	57%	43%
Ntonga <sup>11</sup>	11,581	5,910	5,671	51%	49%
Project Area Total	23,571	12,417	11,154	53%	47%
Mafinga District	103,877	50,193	53,684	51.7%	48.3%

CSO, 2018: Mafinga District Projected Population

#### *Vulnerabilities in the area*

<sup>11</sup> Inclusive of the newly created ward - Nsenje

Major vulnerable group in the areas include women (widows, pregnant women) disabled, youth, children (including orphans), poor households, female headed household's elderly persons and other tribes. Their source of vulnerability may be related to age, disability, illness, lack of income and resources, unemployment, and settlement in un serviced areas. The major drivers of community vulnerabilities are mainly age, disabilities, illness, lack of income and resources, unemployment and illiteracy among the majority of community members. Major vulnerable community groups include women, widows, youth and children (including child headed home).

Figure 4: Household for crop farmers in Damascus Village Mafinga District



Source: Field Data, 2021

#### *Socio-Economic Activities*

The district is predominantly rural, and most of the land is not used for commercial purposes. Despite having plenty of virgin land, a significant part of land is mountainous and not suitable for human settlement. However, the larger part of Mafinga can be utilized for farming and other developmental activities. Most of the land in the area is under customary tenure, this means, its controlled by the traditional authorities. The district has village committees that assist the chiefs in allocation and administration of land. The main livelihood of the people of Mafinga is agriculture, mainly crop production with selected livestock on a small scale. Ninety percent (90%) of the rural communities of Mafinga depend on farming as their source of the livelihood<sup>12</sup>. The crops include maize, beans, millet, sorghum and soya beans, whilst most farmers in the valley areas and plateau depend on pastoral farming and small livestock production. Gardening and horticultural farming is also another source of the farmer's livelihood mainly practiced along the riverbanks. Brick molding is also practiced as a source of income to some selected individuals. Very few individuals depend on businesses mainly small grocery shops and mobile markets. The tree bark hives are sometimes used for

---

<sup>12</sup> WECSZ, Mafinga Hill Conservation Action Plan 2016- 2025

beekeeping and honey production, charcoal production, timber production, carpentry workshops are other sources of livelihood.

#### *Traditional and Cultural Set-up of the Area*

Mafinga District has three (3) chiefdoms namely Mwenechifungwe, Mwenewisi and Muyombe. The district has a number of tribes who have settled in Mafinga over the years. Most predominant local tribes are the Lambya, Fungwe, Nyika and Tumbuka. Namwanga and Bemba's are among the settlers in the area.

The predominant ethnic groups in the project area comprise the Nyika, Fungwe and Lambya. These tribes are patrilineal. Evidence at community level confirms that strong patriarchal tendencies shape the gender relations between men and women in the area. The prevalence of cultural traditions/practices such as polygamy and early marriages, affirm the subordinate position of women to men. Women are not strongly recognized as equal partners with men in development.

The prevalence of early marriages and early pregnancies both exacerbate gender inequalities in access to education and other social needs. Although a re-entry policy to education has been put in place by the Government of the Republic of Zambia, extent of its use to ameliorate the situation is not sufficient. The resultant low education levels particularly by women and girls contribute to the further marginalization of women from the decision-making arena at household and community level.

Polygamy not only entrenches patriarchy while re-enforcing the subordinate position of women to men, it can also result in limiting women's rights, for instance right to own land, family resources and inheritance. In general, power to regulate access to and control over natural resources lies in the hands of traditional authorities. At community level, decision making by the traditional authorities is believed to be made in consultation with the respective communities and male members of the community take the leading role in the dialogue. Women are mainly marginalized in decision making process, largely because they do not see themselves as capable to do so, and are shy and believe men are better placed in terms of knowledge and experience.

At household level, and among male headed households, men have the upper hand in terms of use of resources such as land and forest resources. Natural resource such as water from rivers and streams on the other hand are a community resources and no permission is required for both men and women to enable them to access it.

#### *Land and Natural Resource Status*

Zambia at independence inherited four categories of land: State land and freehold land: 6.3 %; reserves: 36 %; trust land (Customary land): 57.7 %. In 1975, the Conversion of Titles Act was passed, which converted freehold land to statutory leasehold land. Under the Land Act of 1995, all land is vested in the President, who holds the land 'in perpetuity for and on behalf of the people of Zambia. Therefore, land is classified as either "state land" or "customary land", which are in turn governed by leasehold and customary tenure, respectively. State land covers an area of 6.3%, while the rest is under customary land. However, within these categories, some individuals or companies have acquired land titles from the Customary land. Arguably Land is one of the most fundamental natural resources in the country. The resource forms the basis for all forms of production, food, shelter and human sustenance rely on the value of land. Furthermore, land provides welfare support such as source of prestige, a symbol of spiritual status, personal dignity and identity. It can

be argued that the manner in which the resource is administered can contribute to a country's sustainable development agenda.

#### *Traditional Customary Land Tenure System*

Land tenure can be defined as the mode by which land is held or owned, or the set of relationships among people concerning land or its product. Understanding the intricacies presented by land-tenure systems has been a key feature of sustainable development because the terms of access and/or ownership essentially mediate or structure the relationship that people have with their land, influencing what they do with it and how they treat it.

Traditionally, land cannot be sold nor rented but can be inherited or given away once an individual is granted the land, by a headman or Chief. He/she has the authority over it, even if he does not decide to cultivate it. Land is considered as a gift from God. Chiefs and headmen or headwomen are more or less custodians of tribal lands and do not pose any threat to individuals and land ownership. One of the basic principles commonly prevailing in most Zambia is that land is owned communally, although there is some amount of personal control under trust ship. The communal ownership of land is mainly in family lineages or traditional, and is one of the major attributes of customary land tenure. Under this system, specific plots of land are assigned either temporarily or permanently to members of a family for cultivation, while other areas are held in common for pasture, forestry, and collection of wild plants and game. As pointed out, the mode of acquisition of land under customary tenure is relatively easier compared to statutory leasehold under statutory tenure. The major forms of acquisition in case of a member of the community is by:

- a. Grant from the Chief/Headman;
- b. Clearing of virgin land and asset possession rights over the pieces of land;
- c. Inheritance from deceased relations and family members;
- d. Gift from either a relative or from any member of the community.

In case of a person from another community or tribe, the person has to be accepted by the community through either the chief or headman before any land can be allocated to him or her. In both cases there are neither sketch maps, survey diagrams nor documents to be filled in. The ease of mode of acquisition has led to many virgin forests being cleared for agriculture and settlements but abandoned after the land has been degraded (due to poor land husbandry practices). The traditional tenure system usually leads to disintegration of land over time, hence making land management and planning difficult at macro-level.

## 4. ENVIRONMENTAL AND SOCIAL POLICY REGULATIONS AND GUIDELINES

The Policies, laws and regulations promulgated in Zambia and the WWF's SIPP that are applicable to the project. However, for the purposes of the Sustainable Luangwa project, the SIPP principles and procedures shall prevail in cases of discrepancies.

### **4.1 Zambia's Applicable Policies, Laws and Regulations**

#### *4.1.1 National Policy on Environment (NPE), 2007*

The NPE, 2007 is based on the recognition of (i) the fact that Zambia consumes environmental resources at an increasing rate in her development, (ii) that the rate of resource extraction is also exacerbated by the pressure from the growing population [at around 2.9%/annum], and (iii) the country's top priority is to eradicate poverty. Unabated, the combination of these three factors continue to put Zambia's wealth of natural resources at risk of irretrievable loss. Therefore, the NPE is a government response to the need to avoid conflicts of interest, to harmonize sectoral strategies and rationalize legislation with regards to the use and management of the environment in view of the foregoing factors. This is to be achieved through integration of principles of decentralization, community participation and privatization that underpins sustainable development.

The most daunting challenges the NPE was drafted to address include deforestation, land degradation in many places verging desertification, wildlife depletion in protected areas, soil erosion and loss of productivity, inadequate sanitation, air and water pollution. With 62% of the population living in rural areas, the correlation between poverty and environmental degradation is positive as the poor rural households directly depend on natural resources for their livelihoods. In addition, 60% of the country's total land mass is forest land and located in far flung rural areas. Forested land is deforested and degraded through encroachments, agricultural activities and uncontrolled bush fires. The main drivers of environmental degradation include: weak enforcement of legal/regulatory frameworks, breakdown in traditional values and practices, and the expansion of settlements into protected areas.

##### *Vision, aim and rationale*

The NPE, 2007's vision is built on the principles of sustainable development, inter and intra-generational equity. The vision is predicated on providing a framework management guide for the management of Zambia's environment and natural resources to ensure that they are managed on a sustainable basis and retain their integrity to sustain the needs of the current and future generations without compromising either of the two. Essentially, the policy rationale underlines a commitment of the Government, in partnership with the people of Zambia, to effectively manage the environment for the benefit of present and future generations.

##### *Policy Goal and Objectives*

The NPE, 2007 seeks to support government's development priorities to eradicate poverty and to improve the quality of life of the people of Zambia. The policy aims to ensure sound environmental management within the framework of sustainable development in Zambia. This is aimed to be achieved through the support of other policies and strategies developed for other sectors. Through integrated policy approach, it is emphasized that it is the duty of any institution, Government or Non-Governmental Organizations, community groups or peoples' organization or any individual that uses or otherwise carries out activities that affect the environment in any way, to exercise proper control to maintain the productivity and integrity of the environment.

##### *Policy measures*

The NPE, 2007 designed to be implemented through the following measures:

*Institutions:* To build on existing institutions and creating new institutions where it may be required to bridge the weaknesses in links, functions and cross-sectoral cohesion. The key strategy to achieve this is the location of the Ministry of Environment within government's institutional structures with the responsibility for implementing the NPE, 2007.

*Legislation:* To create a legal framework for the implementation of NPE, 2007 and sustainable environmental management. This framework has been created in the Environmental Management Act, 2011. The strategy being a promulgation of an environmental management law that repealed and replaced the Environmental Protection and Pollution Control Act (EPPCA, 1990), and to provide a legal framework for the regulation and establishment of guidelines and principles for the conservation and management of all environmental concerns in Zambia.

*Environmental Planning:* To ensure that national, district and local development plans integrate environmental concerns, in order to improve environmental management and ensure sensitivity to local concerns and needs. The strategy is to carry out strategic review of the implementation status of the National Environmental Action Plan (NEAP).

*EIA, Audits and Monitoring:* To develop a system and guidelines for EIA and Initial Environmental Examination (IEE), audits, monitoring and evaluation so that adverse environmental impacts can be eliminated or mitigated and environmental benefits enhanced.

*Environmental Education and Public Awareness:* To increase public and political awareness and understanding of the need for environmental protection, sustainable natural resource utilization, conservation and management as essential partners in development.

*Private Sector and Community Participation:* To mobilize initiatives and resources in the private sector, NGOs and CBOs, to involve civil society and local communities in particular, in environmental planning and actions at all levels and empower them to protect, conserve and sustainably utilize and benefit from the nation's resources.

*Environmental Human Resource Development:* To provide training needed to implement national programs of environmental protection, conservation and management; to carry out basic and applied research needed to support sustainable management of the environment.

*Gender, Youths and Children:* To integrate gender, youth and children's concerns in environmental planning decisions at all levels to ensure sustainable social and economic development as an integral component in gender and development policy.

*Demographic Planning:* To ensure that the growth of the country's population does not lead to environmental degradation. The strategies include strengthening programs which increase awareness of the population problem and benefits of small family sizes and facilitate free access to information about contraceptives.

*Human Settlements and Health:* To promote rural and urban housing planning services that provide all inhabitants with a healthy living environment and strengthen existing strategies to mitigate the impact of HIV/AIDS upon the people, the economy and the national development process.

*Air Quality and Climate Change:* To minimize adverse impacts of climate change and to reduce air pollution and greenhouse gas emissions.

*Conservation of Biological Diversity:* To conserve, manage and sustainably utilize the country's biological diversity, ecosystems, natural and anthropic habitats, genetic resources and plant and animal species by preserving the nation's natural heritage for the present and posterity. The key strategy, among others, is to identify valuable areas of biodiversity, particularly outside of protected areas, and in consultation with local communities, explore means of protecting such areas, including gazetted as protected areas, purchase of land-use rights or of conservation easements, especially where critical areas are concerned.

*Land:* It was noted that a policy was required for all categories of land with sustainable guidelines and the necessary legal instruments for its implementation that would give high priority to the conservation and enhancement of environmental quality, among other things.

*Land Tenure and Land Use:* To promote sustainable use of land resources of Zambia, primarily, but not exclusively, for agricultural purposes by strengthening and clearly defining security of tenure over land resources including state and customary lands.

*Transboundary and Regional Conservation:* To ensure that Zambia contributes to all trans-boundary conservation initiatives where these are of direct concern to maintaining the integrity of Zambia's ecosystems, biodiversity conservation, protected area network and economic and cultural development, within the region.

*Agriculture Sector:* To promote environmentally sound agricultural development by ensuring sustainable crop and livestock through ecologically appropriate production and management techniques, appropriate legal and institutional framework for sustainable environmental management.

*The Tourism Sector:* To contribute sustainably to the well-being and enhanced quality of life for Zambians through Government led, private sector driven quality product developments that are consistent with the nation's unique natural and cultural heritage.

*The Fisheries Sector:* To manage fish resources for sustainable utilization and to conserve aquatic biodiversity. Among many strategies, there is need to strengthen the Department of Fisheries as the line agency responsible for fish stock so that it is able to manage and conserve the nation's fisheries in a sustainable manner.

*The Forestry Sector:* To manage the nation's natural forest resources in a sustainable manner to maximize benefits to the nation and especially forest-dependent communities retaining their ecological integrity.

*Wildlife Sector:* To conserve and manage wildlife resources and ecosystems within National Parks, Game Management Areas and other protected areas such as heritage sites and forest reserves in such a way as to ensure their protection, sustainable utilization and reduction of people and wildlife conflicts.

*Mining Sector:* To ensure that mining activities conform to sustained natural resource utilization and protection of the environment.

*The Water Sector:* To manage and use water resources efficiently and effectively so as to promote its conservation and availability in sufficient quantity and acceptable quality for all people.

*The Energy Sector:* To meet national energy needs with increased efficiency and environmental sustainability.



*Heritage Sector:* To conserve and preserve Zambia’s natural and cultural heritage for sustainable utilization and appreciation by the public, in order to significantly contribute to the improvement of the quality of rural life for the communities and to the growth of the national economy.

*An Integrated Approach to Policy Implementation:* It has been well noted that matters of policy, planning, regulation and control relating to ecosystems, natural landscapes and natural resources, together with issues relating to natural resource management, cut across at least eleven sectors having specific sector-related policies. This calls for a strategic and holistic approach and integrated framework that deals with key environmental resources as a single national asset under the management of the Ministries in charge of Environment and Natural Resources. The specific policy objectives are analyzed with a view to draw its application to the Sustainable Luangwa Project in Mafinga.

#### *4.1.2 National Water Policy, 2010*

The National Water Policy (NWP), 2010 plays the cardinal role in socioeconomic development and water fundamentality in sustaining all forms of life. In view of this, the Ministry responsible for Water Development undertook a revision of the Water Policy of 1994 in order to provide a comprehensive framework for sustainable development, management and utilization of water resources. As such, the revised Water Policy, 2010, embraces modern principles of water resource management and endeavors to deal with the daunting challenges of poverty alleviation. From a governance perspective, it also takes into account the national decentralization policy.

Notwithstanding the abundance of water resources in the country amounting to 45% of fresh water in SADC Region<sup>13</sup>, Zambia’s water resources are yet to be fully exploited for the benefit of its people. The NWP, 2010 mainly addresses sectoral interests in the water sector with particular emphasis on water resource planning, development, management and utilization, using an integrated approach. With this approach, the policy seeks to address cross-sectoral issues such as, land-use, irrigation, wetland conservation, climate change and conflict management, especially among different water users. Through the NWP, 2010, the Government seeks to demonstrate its commitment to improving the sector by creating an enabling environment within which all stakeholders would perform. It is envisioned to “optimally harness [her] water resource for efficient and sustainable utilization of the resource to enhance economic productivity and poverty reduction” can be achieved.

#### *Water Resources Availability*

Zambia generates an estimated 100km<sup>3</sup> of surface water and an estimated annual renewable ground potential of 49.6km<sup>3</sup> per year. Most of the surface water is poorly distributed while underground water is fairly distributed. There are two main river basins in Zambia, namely – the Zambezi and the Congo River basins. Within these basins fall the six main water catchments namely – Zambezi, Kafue, Luangwa, Luapula, Chambeshi and Tanganyika. The Zambezi River basin is the largest and consists of the upper Zambezi, Kafue and Luangwa catchments.

#### *Ground Water Situation*

---

<sup>13</sup>National Policy on Wetlands, 2018

Zambia has well distributed ground water resources which are, however, not fully developed to respond to full demand. Ground water is the most reliable source of water in rural areas, and there is inadequate information regarding the availability of ground water in the country. Unregulated abstraction and pollution threaten the availability of ground water.

*The Protection of Headwaters*

High pressure from unsustainable resource extraction increasingly threatens headwaters, wetlands and forests. This is mainly associated with settlement patterns in and around headwater areas. These settlements are characterized by socioeconomic activities like agricultural clearance of forests and charcoal production which impacts on the forests sustaining the water areas. As such, consolidation and integration of environmental management becomes an imperative.

*Water Resource Management and Development*

The NWP, 2010 defines water resource management as a practice of making decisions and taking actions on how water should be managed. These decisions and actions relate to river basin planning, development of water harnessing infrastructure, controlling of reservoir releases, regulating floodplains, and developing new laws and regulations. It also includes the promotion of rational and optimal utilization, protection, conservation and control of the water resource. The poor management of water resources in the country is attributed to a number of factors; weak enforcement of legal frameworks, inadequate data and poor information systems, poor inter-agency coordination among different ministries, departments and institutions dealing with water, centralized system of managing water, and lack of monitoring evaluation learning programs and projects.

Development of water resources refers to the harnessing of water resources from different sources such as, rivers, lakes, rain and underground for various purposes by artificial means such as, dams, weirs, boreholes, wells and canals, so that water can be accessed at the desired destination. Inadequate information on boreholes and dams negatively impacts strategic planning for water resource management and regulation.

Rainwater harvesting is not fully developed in Zambia. It is, however, being practiced at individual and institutional levels in rural areas in Zambia. It is planned to help and encourage local communities to harness rainwater using properly designed infrastructure.

*Water for domestic use:* Domestic purposes of water are mainly drinking, washing, cooking, bathing and sanitation. Other subsistence uses include gardening and support of domestic animals, subsistence fishing, making bricks, dipping animals and firefighting. The amount and quality of water consumed in a community also determines the quality of life of people in the community. Therefore, the GRZ has invested in the provision of safe drinking water to enhance the health and productivity of the people.

*Water for food and agriculture:* Water is a prime factor in agricultural and crop production, whether rainfed or irrigated. It is key for livestock (drinking animals) and fish production (aquaculture and fish farming). The GRZ has prioritized agriculture and the social and economic benefits that derive from the use of water.

*Table 3: Agriculture water demand (1,000m<sup>3</sup>/day):*

	2005	2015
Irrigation	7, 346	9, 830

Livestock	183	223
Aquaculture	814	2, 130
<b>Total</b>	<b>8, 343</b>	<b>12, 183</b>

*Water for Energy:* Energy is a vital input in the economic productivity of the country, and water is an essential component in the generation of this energy. Zambia has 1, 800 MW of electric power 94% of which is generated from Hydro Electric Power. Zambia and the whole Southern African region have been experiencing power shortages associated with regular load shedding of power due to low water levels.

*Water for transportation:* Water transport has proved to be convenient and reliable alternative to road transport in areas with large lakes and rivers. Water transport also has the advantage of transporting bulky cargo. Most rural communities use water transport where road network is either poor or inaccessible. The GRZ has maintained water transport system of canals in flood areas like Western Province and Bangweulu swamps in Luapula province.

*Water for recreation and tourism:* Much of tourism in Zambia is directly linked to water-dependent natural resources and ecosystems. National Parks, waterfalls, bird watching in wetlands and protected forest are situated near or along rivers, lakes or swamp. Tourism operators have also tended to situate their infrastructure contiguous with water bodies in order to take advantage of the aesthetic value of water. There are approximately 100 tourist waterfalls, host springs and water bodies like the Barotse floodplain which attract tourists because their unique water environment.

#### *Policy Vision*

To optimally harness water resources for the efficient and sustainable utilization of this natural resource to enhance economic productivity and reduce poverty. To achieve this vision, the policy outlines guiding principles for water resource management as;

- i. Recognition of water as a basic human right
- ii. Government shall be the trustee of the nation's water resources and shall ensure that water is allocated equitably, protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner, in the public interest while promoting environmental and social values and protecting Zambia's territorial integrity
- iii. Water resources shall be managed in an integrated manner
- iv. Domestic and non-commercial needs and the environment shall enjoy priority of water use
- v. There shall be equitable access to water
- vi. Water has a social value and all domestic and non-commercial use of water will not be required to obtain a water permit
- vii. Water has an economic value and the cost of facilitating its use has a significant administrative cost element and this will be reflected in the fees for water permits for the use of water for economic purposes
- viii. There shall be gender equity in accessing water resources and, in particular, women shall be empowered and fully participate in issues and decisions relating sustainable development of water and, specifically, in the use of water
- ix. Efforts to create wealth shall be reflected in all decisions made in relation to the use of water

- x. Location of water resource on land shall not itself confer preferential rights to its use
- xi. The basis management unit shall be the catchment in recognition of the unit of the hydrological cycle; and
- xii. Zambia’s water resources shall be managed to promote sustainable development

The basis of NWP, 2010 is to have “a comprehensive framework for management of water resources shall be developed taking into account catchment management of water resources, stakeholder consultation and involvement, assessment, monitoring, water conservation and preservation of its acceptable quantity and quality, efficient and equitable water allocation to all users and disaster preparedness”.

*Water Resource Management Policy Objectives*

Table 4: Policy objectives

<b>Policy objectives</b>	
i.	To ensure inter-sectoral linkages in the management of water resources so as to support cross-sectoral development needs and maximize the economic benefits accruing thereto
ii.	To promote and implement the development of a catchment management system and improve accessibility and utilization of water resources for various uses
iii.	To promote effective community participation and stakeholder involvement, particularly women and children, in the design, execution and management of water resources, programs and projects
iv.	To promote regional co-operation on shared watercourses
v.	To ensure that water resources are efficiently and equitably allocated to all users in a sustainable manner
vi.	To ensure that water resources are preserved and maintained to acceptable quality standards; and
vii.	To manage emergency situations effectively with minimum loss to life and property.

In order to achieve water objectives, the following measures are to be implemented.

Table 5: Policy measures

<b>Policy measures</b>	
i.	Establish a comprehensive legal, institutional and regulatory framework for effective of management of water resources in an equitable manner with strong stakeholder participation by undertaking an integrated water resource management (IWRM) system approach
ii.	Encourage efficient utilization of water resources and water demand practices for different uses
iii.	Undertake comprehensive water resources assessments for surface and ground water sources
iv.	Identify ecosystems at risk and recommend remedial measures
v.	Introduce and integrated catchment water management system that allows the local people, particularly women and children, to effectively participate in the management of water resources in their area

vi.	Contribute to the minimization of the impact of water-related disasters such as droughts and floods through provision of early warning systems
vii.	Strengthen the human, technical and financial capacity for addressing the water resources management needs in the water sector
viii.	Establish a mechanism for collaboration, coordination and consultation in the water sector
ix.	Establish a water resource management information system and monitoring network including information dissemination
x.	Develop national water resources management plans
xi.	Develop water resources regulations and guidelines
xii.	Develop mechanism for equitable and reasonable allocation of water
xiii.	Develop a fair and justifiable tariff structure for water use
xiv.	Develop water allocation plans with the participation of local communities
xv.	Designate protected areas in collaboration with line ministries and institutions
xvi.	Declare water shortage areas
xvii.	Develop and maintain a water quality assessment system
xviii.	Develop plans for the exploitation of the potential from shared watercourses in line with national priorities and the need for fostering regional co-operation
xix.	Promote regional collaboration in areas of research, data collection and information exchange
xx.	Establish institutions for the management of shared watercourses in collaboration with national institutions to ensure that Zambia's interests are protected
xxi.	Develop national capacity for negotiation and management of shared watercourses
xxii.	Develop decision-making support system for shared watercourses
xxiii.	Establish early warning systems in collaboration with other relevant institutions
xxiv.	Promote preventive measures through community education and awareness; and
xxv.	Collaborate with regional and international bodies in emergency situations

*Water Resource Development Policy Objectives and Measures*

*Policy statement:* To achieve sustainable water resource development with a view to facilitate an equitable provision of adequate quantity and quality of water for all competing groups of users at reasonable costs and ensuring security of supply under varying conditions. The objectives of water resource development are outlined below.

Table 6: Policy measures

<b>Policy Objectives</b>	
i.	To ensure that Zambia's water resources are developed to contribute to wealth creation through improved access to water, improved food production and food security
ii.	To ensure inter-sectoral linkages in the development of water resources so as to support cross-sectional development needs
iii.	To manage and regulate water resources in order to improve accessibility and sustainability

iv. To develop water resources to mitigate impacts of extreme hydrological events such as flooding and droughts
v. To ensure improved access to water and sustainable development of the water resources; and
vi. To ensure sustainable development of water resources

To achieve the foregoing objectives, the following measures are to be implemented.

Table 7: Policy measures

<b>Policy Measures</b>	
i.	Ensure that Zambia's water resources are effectively managed and contribute to wealth creation through increased access to safe drinking water and sanitation, increased food production and food security for all Zambians
ii.	Promote and facilitate development of surface and ground water resources to improve access
iii.	Ensuring through regulations that water resources development is multipurpose and benefits different categories of users
iv.	Regulate the development of water resources and integrate other sector needs such as agriculture, tourism and hydro-electric power
v.	Issue guidelines on the development of water resources
vi.	Regulate the construction of all water development infrastructure
vii.	Register water development programs and projects
viii.	Register and regulate water resource development construction companies
ix.	Monitor dam safety
x.	Promote the construction of dams and provide guidelines on the operation of private or public dam owners and operators
xi.	Design and implement water resource development projects in coordination with other relative sectors
xii.	Establish a program for construction and rehabilitation of dams and weirs with emphasis on multipurpose uses
xiii.	Subject water resource development programs and projects in dam development, rain harvesting schemes, water intake points, river diversions, pumping stations, water well drilling, ground water abstraction and use and inter-basin water transfer to strategic environmental assessment and environmental impact assessment
xiv.	Establish an integrated water resources data and information acquisition and management system to meet all water resources management needs
xv.	Install of facilitate the installation of metering systems on all hydraulic structures
xvi.	Regulate infrastructure to ensure that water resources infrastructure benefits all sector of society especially the disadvantaged and poor; and
xvii.	Facilitate public-private participation in water development

#### 4.1.3 National Forestry Policy (NFP, 2014)

The policy highlights that (i) woodlands and trees are among the nation's most extensive natural heritage resource requiring judicious management, and (ii) livelihoods and the integrity of ecosystems hinge on how well the forests are managed. These resources are renewable and hence, their availability depends on the present generation's actions. Therefore, the NFP, 2014 aligns the forestry sector to current trends in forestry and the necessity of meeting the national strategies enshrined in the National Policy on Environment (NPE, 2007), national development plans, Multilateral Environmental Agreements (MEAs) and Treaties to which Zambia is a party.

The NFP, 2014 reflects a broad consultative process undertaken based on the principles of devolution framed under the Decentralization Policy, Zambia's Vision 2030, empowerment, equity and justice, and community and private sector participation. It aims at motivating responsible sustainable forest management and feasible stakeholder interventions in forest management. Forests are the major sources of timber, traditional medicines, wood fuel, food and building materials. They play a key role as watersheds and in soil conservation, preventing soil erosion. The review of Forestry Policy of 1998 was necessitated by the increasing demand on forest resources, the need to address emerging issues such as climate change and bio-energy development, and the need for devolution of forest management systems.

Forests in Zambia cover 66% of the total land mass with 9.6% being protected forest reserves<sup>14</sup>. However, these forest resources are under pressure from the effects of several degrading factors including deforestation, encroachment, uncontrolled bush fires and agriculture expansion. Inappropriate management regimes and unsustainable harvesting systems lie at the center of forest degradation. Therefore, the key issues addressed under the NFP, 2014 include expanded protected area system, climate change, bio-fuels, and transboundary forest resource management.

The policy provides for participatory forest management particularly of the local communities, traditional authorities, private sector and other stakeholders such as NGOs, at all levels of decision-making, implementation, monitoring and evaluation. The policy encourages stakeholder roles, resource tenure, costs and benefit sharing mechanisms related to forest resource management, investments and forest industries development. The policy also makes recognition of regional and international opportunities and obligations brought to the fore through frameworks such as the SADC protocols on forestry and other natural resources, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and forest related MEAs.

#### *Policy Vision, Rationale and Guiding Principles*

The NFP, 2014 envisions sustainable forest management of all types of forests to enhance forest products and services that will contribute to mitigation of climate change, income generation, poverty reduction, job creation and protection and maintenance of biodiversity. This vision informs the policy rationale designed to reduce deforestation and forest degradation. It is predicated on ensuring increased forest cover and enhanced carbon stocks through integrated participatory forest management, improved law enforcement and private sector investment. This is to be achieved through a shift from a centralist management system to a broad-based participatory framework based on principles of good governance, transparency and democracy in forest management.

---

<sup>14</sup> Zambia National Forest Policy (ZNFP, 2014)

The implementation of the NFP, 2014 is guided by the following principles: Broad-based Participation, Equity and Responsibility, Sustainable Forest Management, Holistic and Ecosystem based, Abatement of climate change, Precautionary Principle and Free, Prior informed Consent.

### *Sector Challenges*

The NFP, 2014 mainly responds to the following challenges: arranged to give indication of the extent to which such challenges apply to the Sustainable Luangwa Project in Mafinga.

Table 8: Policy measures vs safeguards categorizations issues

<b>Forest Sector Challenges</b>	<b>Applicability to the Sustainable Luangwa Project Area</b>
i. Unsustainable harvesting systems	<b>3</b>
ii. Charcoal production and fuel wood	<b>3</b>
iii. Increasing clearance of forestland for farming	<b>3</b>
iv. Forest degradation	<b>3</b>
v. Uncontrolled bush fires	<b>3</b>
vi. Loss of biodiversity	<b>3</b>

Key: 1 = not likely applicable: 2 = slightly applicable: 3= applicable:

The challenges have been attributed to inadequate integrated approach to forest resource management and uncoordinated land-use planning. The low monitoring and enforcement capacity by the Forestry Department at local level compounds these challenges. As a result, forest resources suffer from excessive exploitation, soil erosion, siltation, reduction in river stream flow, climatic variability and other negative impacts. There is a need for the project to motivate and enhance community participation to be supported by the clear guidance on benefit sharing mechanisms and resource user rights towards sustainable resource management.

#### *4.1.4 Second National Agricultural Policy (SNAP), 2016*

The SNAP, 2016 provides general guidelines to the Government of the Republic of Zambia (GRZ), Private Sector, Non-Governmental Organizations (NGOs) and Development Partners (DPs) for the development of the agriculture sector in Zambia. It was formulated to take into account different trends and emerging issues in the sector and to respond to the challenges observed during the implementation of the 2004 – 2015 National Agriculture Policy (NAP). Owing to the concerns that the 2004 – 2015 NAP failed to; effectively contribute to increased rural incomes, respond to poverty reduction needs, achieve inclusive growth, address perpetual agricultural marketing and financing challenges, and provide for adequate response to climate change associated with erratic rainfall patterns, it was deemed inevitable and responsive to revise the policy document into the SNAP, 2016.

An important consideration in the SNAP, 2016 is the need to re-align agriculture development objectives to the political environment in the country. GRZ identifies the agriculture sector as a key driver of the economy in order to supplement mining which has, over the years, been the largest contributor of foreign exchange earnings and national revenue.



The policy covers food and nutrition security, agricultural production and productivity, agricultural diversification, agricultural research and extension services, sustainable resource use, promotion of irrigation, agro-processing and value addition, agricultural markets and trade, livestock and fisheries development. The policy also addresses the institutional and legislative framework, decentralization, private sector participation, support to co-operatives and other farmer organizations, and crosscutting issues such as gender mainstreaming, HIV/AIDS, and mitigation of climate change. The impact of climate change on the predominantly agrarian production in Zambia is noted, within the policy document, that farming systems have been negatively affected by the changing rainfall patterns across the country's three agro-ecological regions.

The SNAP, 2016 was envisioned to be implemented within the overall framework of **Zambia's Vision 2030**, enhancing contributions towards profitability of agricultural enterprises, job creation, increased income generation, poverty reduction and increased agricultural contribution to Gross Domestic Product (GDP).

#### *Vision and rationale*

The vision of the SNAP, 2016 is an efficient, competitive and sustainable agriculture sector, which assures food and nutrition security, increased employment activities and incomes. The policy vision is predicated on the rationale to provide a conducive environment that will stimulate sustainable agriculture development, and to provide a framework that will promote sustainable agricultural diversification, agricultural commercialization, private sector participation and inclusive growth. It is further envisioned that the policy will provide competitiveness, stimulate efficiency, increased productivity and profitability in the agriculture sector

#### *Policy objectives*

To improve efficiency and effectiveness of the existing staff by training and re-training extension staff, by improving staffing levels for front-line extension staff; to establish new farm institutes, livestock service centers and farmers/fisheries Training centers; to harmonize the public and private extension delivery system; to strengthen the research-extension-farmer linkages; to promote the use of ICTs in extension service delivery through mobile phone SMS based extension services; to support and promote the use of video and audio mobile vans in extension service delivery; to promote private extension service provision to supplement public extension system; to promote the participation of individual farmers and farmer group organizations, including co-operatives in technology transfer, and to promote public-private partnerships in dissemination of research technology.

Further, the SNAP, 2016 generally seeks to;

- i. Increase effectiveness and efficiency of agricultural research and development
- ii. Strengthen the capacity of agricultural training institutions
- iii. Improve the efficiency of agricultural markets for inputs and outputs
- iv. Promote the availability of, and accessibility to, agricultural finance credit facilities and insurance
- v. Improve private sector participation in agricultural development
- vi. Improve food and nutrition security
- vii. Promotes sustainable management and utilization of natural resources
- viii. Mainstream environment and climate change in the agriculture sector
- ix. Promote the mainstreaming of gender, HIV/AIDS and governance issues in agriculture.

#### *Implementation and institutional framework:*

The Ministry of Agriculture (MoA) and the Ministry of Fisheries and Livestock (MFL) shall take a leading role in facilitating, coordinating, regulating, monitoring and evaluating the policy. This is to be achieved through strong partnerships with farming communities, input suppliers, traders, agro-industry, financial institutions, Civil Society Organizations (CSOs), Development Partners and Regional Economic Communities such as the Southern African Development Community (SADC), East African Community (EAC) and the Common Market for East and Southern Africa (COMESA). There are additional partnerships to be established with key stakeholders such as the African Union (AU), World Food Program (WFP), Food and Agriculture Organization (FAO), Zambia National Farmers' Union (ZNFU), Agriculture Sector Advisory Group (AgSAG) and the Agricultural Consultative Forum (ACF).

#### *Policy Challenges*

Poverty remains the key policy challenge to be addressed under the SNAP, 2016. Poverty levels in the predominantly agrarian rural areas of Zambia are still very high among small-scale farmers. The majority of small-scale rural farmers have remained stagnant at less than two hectares of cropped land receiving limited value from crop production. As such, agricultural extensification is seen to be the answer to the question of low production and productivity. The consequence of agricultural extensification is expanded land-use and conversion of forest land into agriculture. The low agricultural production and productivity remains another daunting challenge alongside erosion of indigenous livestock and plant genetic resources, low private sector participation especially in agricultural marketing, food insecurity at household level and a high dependence on rain-fed agriculture, in a climate-changing environment.

#### *4.1.5 The Second National Biodiversity Strategy and Action Plan (NBSAP-2) 2015-2025*

The NBSAPs are the principal instruments for implementing the CBD in accordance with Article 6 of the Convention. Zambia's NBSAP-2 is a conscious attempt to domesticate broader international frameworks including Sustainable Development Goals (SDGs) and other national obligations deriving from international instruments to which Zambia is party. This includes the Convention on Biological Diversity (UNCBD), the Climate Change regime of the UNFCCC, the Ramsar Convention of Wetlands of International Importance, and regional instruments such as the Southern African Development Community (SADC) Protocols on Fisheries, Water, Wildlife, Forestry, Biosafety, Energy, Mining, Gender, Development, Trade, etc.

The NBSAP-2 is predicated on a strong belief that environment and its natural resources are critically important to the country and need to be protected as part of national heritage for socioeconomic development and for the ecological services it provides. This approach is based on a firm belief in intergenerational equity ensuring that the next generation is not deprived of the goods and services currently being provided by the environment and natural resources.

NBSAP-2 is a national commitment to the protection of fauna and flora with over 40% of the total landmass reserved for protection through a network of various types of protected areas. Therefore, the NBSAP-2 represents a commitment to achieving both long-term and medium-term national development objectives enshrined in the Vision 2030 and the now Seventh National Development Plan (7NDP).

The NBSAP-2 further reiterates that Zambia's forests, wildlife, wetlands and protected areas constitute a basis for livelihoods for the majority of people as a resource base, and it is a backbone of the economy. The NBSAP-2 was developed to be a transformative strategy emphasizing evidence-based interventions, fully participatory processes, and the important role of protected areas, incorporation of climate change resilience principles, restoration activities, the need for diverse financing mechanisms and a supportive policy, legal and regulatory (PLR) framework. This assertion depicts the intricate nexus of environmental and social safeguards that are inherently knitted within natural resource management and biodiversity conservation.

#### *NBSAP-2 landscape for biodiversity*

The configuration of biodiversity in Zambia takes a landscape approach on land, land-use and land-use planning, in water, forests, wildlife, fisheries and agriculture. As such, the implementation of the NBSAP-2 is supported by a number of other national policies, legislation, regulatory instruments and plans. In addition, the country's accession to regional and international agreements and protocols augment the policy framework through which conservation of biodiversity and sustainable use of natural resources can be achieved. In total; thirteen (13) national policies, seventeen (17) legislative instruments, eleven (11) national plans and strategies, twelve (12) regional agreements and protocols and eleven (11) notable international agreements, all have a direct positive bearing on the conservation of biodiversity in Zambia.

*Ecosystem diversity status and trends:* Zambia is richly endowed with natural resources and fairly rich in biological diversity. Under flora, this diversity is classified into four main ecosystems based on vegetation; (a) Forests – consisting of a continuous stand of trees usually over 10m tall with overlapping crowns, (b) Thickets – a low forest of bushes and climbers usually under 7m tall, (c) Woodlands – an open stand of trees usually over 7m tall with an open canopy and a field layer dominated by grasses and herbs, and (d) Grasslands – land covered with grasses and other herbs in which woody plants are either absent or if open stand of trees, usually over 7m tall. In addition, the country has biomes such as the aquatic – including rivers and lakes; wetlands and the Anthropic – including cropland and fallow, forest plantations and built up areas.

*Protected Area system:* The network of Zambia's statutory protected comprises 480 Forest Reserves, 175 National Forests and 305 Local Forests, within an estimated total of 73, 361km<sup>2</sup>; 20 National Parks covering 63, 630km<sup>2</sup> and 36 Game Management Areas (GMAs) covering 167, 557km<sup>2</sup>. But the management effectiveness and level of protection for these protected areas varies from place to place and ranges from high to low management.

*Wetlands of international importance:* Zambia has eight (8) Ramsar sites with a combined total of 40, 305km<sup>2</sup>. The wetlands are habitats of several important fauna and flora species including some endemic and endangered species.

#### *Major Biodiversity Threats to in Zambia*

NBSAP-2 highlights the following biodiversity threats in Zambia:

*Habitat transformation:* Deforestation and forest degradation is the leading cause of habitat transformation in Zambia. The Northern part of the country has lost much of its forest due to shifting cultivation yet the area has the highest level of flowering diversity. Deforestation is also driven by conversion of forest land to agriculture land in Central, Eastern and Southern Provinces of the country. Mining in some protected areas is also responsible for habitat transformation. Damming of upstream rivers for power generation affects

disrupts the natural hydrology of the Zambezi flood plain, alters flows and causes habitat loss of plant and animal species.

*Encroachments:* Between 2000 and 2011, forests had significantly lost their integrity and quality due to encroachments through agricultural cultivation and settlements. The low protection status of the forests plays a key role in the poor control of encroachments.

*Uncontrolled fires:* Man-made wildfires contribute to forest degradation in Zambia by damaging forests and woodlands. Annual burning is common in agro-ecological region IIa which includes the main National Parks. Incidences of wildfires were reported to have increased by 2% annually between 2004 and 2008. But the actual damage caused by wildfires has not been adequately assessed.

*Climate change:* Rainfall in Southern Africa has been decreasing in the last 25 years with severe droughts recorded in 20 years of the 25 years of decreasing rainfall. In Zambia, each of the three agro-ecological regions has been experiencing a reduction in normal rainfall distribution for 11 years recorded from 1990/1991 to 2003/04. In addition, rising temperatures affect livestock and crop production; fish stocks are reported to have dwindled due to reduced precipitation. Specific species of fish like breams and sardines may not survive the environmental change induced by climate change. This change also induces alterations in the migration patterns of wildlife making animals more vulnerable than they would have been in normal conditions. It also affects those communities who depend on wildlife as an integral part of their nutrition. Forests are equally affected by climate change as higher temperatures and droughts inhibit natural regeneration. Particularly, the regeneration of Miombo forests which cover 60% of the country is impaired and will negatively affect the large array of biodiversity and ecosystem services supported by these forests.

*Unsustainable utilization:* A number of timber species are known to be locally threatened due to overexploitation as mature trees are becoming rare. Among them, *Afzelia quanzensis*, *Daniela ostiniana*, *Pterocarpus angolensis*, *Khaya nyasica* and *Mitragyna stipulosa*. Despite their protection status, these species have continued to decline due to uncontrolled overexploitation. Quantities of caterpillars in Northern, Muchinga and Central Provinces of Zambia have drastically decreased due to overexploitation for the market value.

*Disease and pesticides:* Invertebrates have been documented to be negatively impacted by the use of non-targeted spraying of persistent organo-pesticides in the control of Trypanosomiasis.

#### **4.2 Zambia's Legal and Regulatory Frameworks**

Globally, enshrining environmental rights under a constitution, can be expressed either as part of the fundamentally guaranteed rights or as mere declarations of public policy. A fundamental right is more indestructible than statements of policy or procedural norms and grants an individual or person the right thereby assuring an individual of the protection of his or her rights by the State. The inclusion of environmental rights in the Constitution as a statement of public policy, may either appear as one that obliges the legislature to enact legislation that regulates particular areas or simply one that gives guidelines to the State and cannot be enforced.

The Zambian Constitution (Act No. 2 of 2016), as the supreme law of the land, covers aspects of human rights and the environment. Article 257 obliges the State to put in place mechanisms that aim to reduce waste,

promote relevant environment management systems and tools, and ensure enforceability of environmental standards. Article 255 enunciates the principles by which the development and administration of the environment and its natural resources must be governed. The Constitution places a duty on a person to cooperate with State organs to maintain a clean, safe and healthy environment. Article 256 provides: A person has a duty to co-operate with State organs, State institutions and other persons to— (a) maintain a clean, safe and healthy environment; (b) ensure ecologically sustainable development and use of natural resources; (c) respect, protect and safeguard the environment; and (d) prevent or discontinue an act which is harmful to the environment.

In its natural meaning, article 256 places a duty on a person to co-operate with State organs but does not place an equivalent obligation on the State to guarantee a clean, safe and healthy environment. This duty is further extended by obligations enunciated under article 43(1) which require a citizen, inter alia, to – protect and conserve the environment and sustainably utilize natural resources and maintain a clean and healthy environment. On the part of the State, the obligation placed on it by the Constitution is simply to:

...protect biological diversity, implement mechanisms that minimize waste, promote appropriate environmental management systems and tools, encourage public participation, protect and enhance the intellectual property, ensure that the environmental standards enforced in Zambia are of essential benefit to citizens, and establish and implement mechanisms that address climate change.

It is argued that the Constitution has not placed corresponding duties on the State regarding the attainment of the right to a clean and healthy environment. Further, it has not made provision for legal redress arising from the failure by the State to ensure that there is a clean and healthy environment. Thus, an assertion is made that, there is a serious lacuna under the Constitution as it seeks to place an arduous undertaking on a citizen when there is no corresponding duty on the State. This situation is unlike the Constitution of 1996 which had acknowledged a person' right to a clean and healthy environment. The preamble to the Constitution said:

*“WE, THE PEOPLE OF ZAMBIA by our representatives, assembled in our Parliament, having solemnly resolved to maintain Zambia as a Sovereign Democratic Republic PLEDGE to ourselves that we shall ensure that the State shall respect the rights and dignity of the human family, uphold the laws of the State and conduct the affairs of the State in such manner as to preserve, develop, and utilize its resources for this and future generations”.*

Actualizing the aspiration outlined in its preamble, the Constitution had placed a duty on the State to respect the right to a clean and healthy environment, albeit under Part IX – the Directive Principles of State Policy. Under article 112, the State committed itself to ‘strive to provide a clean and healthy environment for all’ and ‘promote sustenance, development and public awareness of the need to manage the land, air and water resources in a balanced and suitable manner for the present and future generation.’ The significance of this commitment by the State was apparent in its desire to ensure attainment of the right to a clean and healthy environment. The only challenge with that provision was the non-justifiability of the right.

It is clear from the provisions cited that the Constitution recognizes the significance of a sound environment, however, it does not contain an explicit provision relating to the right to a safe, clean, and healthy environment. The proposed Bill of Rights guaranteed every person the right to clean and safe water. Article 44 proscribed that every ‘person has the right to a safe, clean and healthy environment.’ The provision was

absolute and guaranteed its full realization by the State. Though couched lucidly, article 44 had three inherent weaknesses: first, it does not define nor describe what the right is and this raise concerns such as– what is a safe, clean and healthy environment? What are its constituent elements? What is the threshold below which an act must fall before it can be said that the right has been violated? These questions cannot be addressed by the vague couching of the right. Secondly, the nature of this right made it devoid of specificity. In the absence of jurisprudence developed on the subject, it is possible that it may not have covered more than the legislators would have envisioned– too broad. Thirdly, the right was devoid of an enforcement mechanism except for the one akin to all rights generally thereby potentially making the realization of the right nearly impossible.

The nature of the right to a safe, clean and healthy environment is that it is a social and economic right. This means that its realization is dependent on the availability of resources. In this regard, article 45 stated thus:

- (1) The State shall take reasonable measures for the progressive realization of economic, social, cultural and environmental rights.
- (2) Where a claim is made against the State on the non-realization of an economic, social, cultural or environmental right, it is the responsibility of the State to show that the resources are not available.
- (3) The Constitutional Court shall not interfere with a decision by the State concerning the allocation of available resources for the progressive realization of economic, social, cultural and environmental rights.

Article 45(1) required the State to 'take reasonable measures' for the progressive realization of environmental rights. What would amount to reasonable measures was not elaborated by article 45(1). It cannot be assumed that this included virtually anything that would be considered 'a measure'. Article 45(1) was narrow as it did not explicitly state the nature of measures. It is reiterated that the measures to be adopted by the State should be those that complement the legislation by providing the 'mechanics' for realizing the right. The inherent weakness of article 45(1) lay in its failure to place an obligation on the State to enact appropriate legislation, as a measure, to better protect the right. Thus, 'reasonable measures' purportedly excluded legislative measures thereby leading to an assumption that legislation on the environment, in the form of the EMA, is adequate needing only 'reasonable measures', however, this is not so.

Under Article 45(2), where the full enjoyment of the right has not been fully realized, the State bore the responsibility of showing that the resources are not available. The Constitutional Court was ousted by article 45(3) from interfering with the State' decision concerning the allocation of available resources. The exclusion of the Court' intervention limited the full realization of the right. This meant that any 'justification' of the State' failure to provide resources should be accepted by the Court. Also, article 45(3) appeared to defeat the purposes of article 45(2) and thereby leading to a paradox – the State bore the duty to show that resources are not available, but the Court was excluded from inquiring into how the available resources will be utilized.

#### **4.2.1 The Lands Act, 1995, CAP 184 of the Laws of Zambia**

The Lands Act vests the absolute ownership and alienation of all land in the Republic of Zambia in the President. It provides for the continuation of leaseholds and leasehold tenure, the recognition and continuation of customary tenure which can also be legally converted to leasehold tenure; it establishes the Land Development Fund and the Lands Tribunal; it repeals the Land (Conversion of Title) Act, repeals the Zambia (State Lands and Reserves) Orders of 1928 to 1964, the Zambia (Trust Land) Orders of 1948 to 1964,

the Zambia (Gwembe District) Orders of 1959 to 1964 and the Western Province (Land and Miscellaneous Provisions) Act, 1970. By repealing and replacing the foregoing legal instruments, the Lands Act, Cap 184 effectively abolishes all colonial land tenures systems, some of which were carried forward post-independence up to the 1980s, and thereby establishes the current duo land tenure system, i.e. State and Customary lands with the respective Statutory and Customary tenure systems.

‘Land’ in the interpretations section of the Lands Act, legally means any interest in land whether the land is virgin, bare or has improvements, but does not include mining right as defined in the Mines and Minerals Act in respect of any land. Lease means a lease granted by the President or a lease that was converted from freehold title under the repealed Act. State Land means land which is not situated in a customary area. This definition of State land reinforces the duality of land categorization and duo tenure systems in Zambia – that land is customary and anything that is not customary land is State land.

Section *three*, read with sub-section *seven*, declares the principle of universal sovereignty, over natural resources by vesting the absolute ownership of all land in the President and is to be held by him in perpetuity for and on behalf of the people of Zambia. This vestment is further upheld through the meaning of ‘Lease’ which can only be legally granted by the President. As such, the President reserves the power to alienate land vested in him to any Zambian and/or to non-Zambians on specified conditions. Notwithstanding this power, the President shall not alienate any land situated in a District or any land held under customary tenure. But being the absolute holder of land ownership in the Republic, the President may exercise power to alienate land in a District or land held under customary tenure only after consultation with the local authority, with the Chief or with the authority responsible over the land to be alienated. It is explicit within the entire object of section *three* that the foregoing system of land administration is in public interest for the common benefit, directly or indirectly, of the people of Zambia. This benefit is to be achieved within the framework of land-use and natural resource management, i.e. in alienating land, the President shall take such measures as shall be necessary.

Table 9: Legal Measure vs Applicability to the Project Area

<b>[Sec.3, sub sec.7]</b>	<b>Applicability to the Project Area</b>
a. Control settlements	<b>3</b>
b. Methods of cultivation	<b>3</b>
c. Utilization of land as may be necessary for the preservation of natural resources over the land	<b>2</b>
d. Set aside land for forest reserves	<b>3</b>
e. Set aside land for game management areas and national parks, and for the development and control of such reserves	<b>1</b>

**[1 = not applicable: 2 = slightly applicable: 3 = very applicable]**

Section *seven* provides for express recognition and continuation of customary land tenure with an allowance to prevent any infringement with the enjoyment of the customary tenure rights. This provision is a fundamental safeguard matter for the Sustainable Luangwa Project in Mafinga Hills given the fact that the project will be domiciled, and will operate in a customary land area. At the same time, the recognition of a person’s rights under customary tenure shall not be construed as an infringement of any other provision of

the Lands Act or any other law except for a right or obligation which may arise under any other law. This caveat to the recognition and protection of customary tenure rights may be very pertinent to the management and protection of the Mafinga Hills National Forest Reserve whose adequate protection will inevitably be part of the solutions the Sustainable Luangwa Project brings to the fore. Otherwise, it is prohibited for any person to occupy or continue to occupy vacant land according to section *nine*. Essentially, vacant land does not render land to be an open access resource.

Because land and land administration have become conflictual over the years, section *twenty* establishes the Lands Tribunal for determination of land disputes. In adjudicating land matters, the Tribunal shall not be bound by the rules of evidence applied in the civil proceedings. The Lands Tribunal Act regulates all procedural matters relating to application and submission of land-related grievances to the Lands Tribunal. In general, the Minister has discretion to make regulations, through statutory instruments, for the better carrying out of the provisions of the Lands Act, in accordance with section *thirty-one*.

#### **4.2.2 The Environmental Management Act NO.12, 2011**

The Environmental Management Act No.12, 2011 (EMA, 2011) was enacted in response to ensuing environmental challenges given the inadequacy of environmental regulation under the Environmental Protection and Pollution Control Act (EPPCA, 1990). As such, the EMA, 2011 establishes the continuance of the Environmental Council of Zambia (ECZ) but renames it as Zambia Environmental Management Agency (ZEMA) as the sole environmental regulator in Zambia. The law defines and prescribes powers and functions of ZEMA, including the preparation of the State of the Environment Report, environmental management strategies and other plans for environmental management and sustainable development.

The EMA, 2011 provides for integrated environmental management, the protection and conservation of the environment, the sustainable management and use of natural resources. Part of the strategy to enforce this provision is the mandate to conduct environmental assessments of proposed policies, programs and plans which are likely to have an impact on environmental management. The objective of this mandate is to prevent and control pollution and environmental damage. This includes provisions for environmental auditing and monitoring, public participation in decision-making in environmental matters and access to environmental information. In addition, the Minister may, by statutory instrument, on the recommendation of the Agency and relevant appropriate authority, declare an area of land which is ecologically fragile or sensitive to be an Environmentally Protected Area. The Agency would then, where an area is declared to be an Environmentally Protected Area, in consultation with the appropriate authorities and conservancy authorities, prepare an environmental protection plan for the area.

The EMA, 2011 also establishes the environmental fund, facilitates the implementation of international environmental agreements and conventions to which Zambia is a party. It repeals and replaces the EPPCA, 1990. Section *three* prescribes the superiority of the Act to prevail over any matters of environmental protection and management. For the protection and management of water resources in particular, the statutory superiority of the EMA, 2011 mandates ZEMA with the regulatory role under section *forty-eight*, to liaise with relevant authorities in;

- (i) The formulation of rules for the preservation of aquatic areas, drinking water sources and reservoirs, recreational and other areas where such special protection may be needed,
- (ii) The establishment of water quality and pollution control standards,
- (iii) Determining conditions for discharge of effluent into the aquatic environment,



- (iv) Carrying out of investigations of actual or suspended water pollution, including data collection,
- (v) Taking steps to authorize any works to be carried out which appear to be necessary to prevent or abate water pollution from natural causes or abandoned works or undertakings,
- (vi) Determining the analytical methods by which water quality and pollution control standards can be determined [...],
- (vii) Initiating and encouraging international co-operation in the control of water pollution, in particular, with those neighboring countries with which Zambia shares river basins,
- (viii) Collecting, maintaining and interpreting data on water quality and hydrology which is relevant to the granting of licenses under the EMA, 2011, and
- (ix) Doing all such things as are necessary for the monitoring and control of water pollution.

However, for the day-to-day regulation of water resources, the EMA, 2011 stipulates, under section *seventy-four*, that water resources shall be managed in accordance with the Water Resources Management Act, just as the forests shall be managed in accordance with the Forests Act, wildlife in accordance with the Wildlife Act and fisheries, in like manner, in accordance with the Fisheries Act. The same applies to agriculture, national heritage conservation, tourism and other sectors.

In doing so, the Act reinforces the Constitutional right of every person in the Republic of Zambia to a clean, safe and healthy environment. This right includes access to the various elements of the environment for recreational, educational, health, spiritual, cultural and economic purposes. This right is further augmented with a procedural right to seek legal action against any person who threatens the right to a clean, safe and healthy environment. The procedural right includes a right and duty to compel a public officer to discontinue and/or prevent any action or omission which threatens to damage the environment and put human health at risk of harm. But while section *three* gives a Constitutional right to all Zambians, section *five* provides a duty to all citizens of the Republic to safeguard and enhance environmental protection.

The right to a clean, safe and healthy environment and the duty to safeguard and enhance environmental protection are set to be achieved through a set of guiding environmental principles outlined in section *six*. These principles are foundational to environmental management and they lay the legal foundation and regulatory ethos for natural resource management enshrined in other sectoral legislation such as water, forestry, fisheries and wildlife. The principle of intergenerational equity is provided for in terms of environment being a common heritage for both the present and future generations. Other principles include:

- (i) The principle of integration - which provides that the environment should be considered as a whole
- (ii) The precautionary principle – which provides that lack of scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation or where there is a threat of serious irreversible environmental damage
- (iii) The polluter pays principle – which provides that the person or institution responsible for pollution or any other damage to the environment shall bear the cost of restoration and cleanup of the affected area to its natural or acceptable state
- (iv) Public participation – which provides that the people shall be involved in the development of policies, plans and programs for environmental management,
- (v) Access to information – which provides that citizens shall have access to environmental information to enable them make informed personal choices,

- (vi) Waste minimization – which provides that the generation of waste should be minimized, wherever practicable and waste should be, in order of priority, be re-used, re-cycled, recovered and disposed of safely in a manner that avoids creating adverse effects,
- (vii) Sustainable development – which provides that the environment is vital to peoples’ livelihoods and shall be used sustainably in order to achieve poverty reduction and socioeconomic development,
- (viii) That non-renewable natural resources shall be used prudently, taking into account the needs of the present and future generations,
- (ix) That renewable resources shall be used in a sustainable manner and does not prejudice their viability and integrity,
- (x) Community participation and involvement in natural resource management and sharing of benefits arising from the use of resources shall be promoted and facilitated.

Of the *one hundred thirty-five* (135) sections of the EMA, 2011, sections *four to six* are very pertinent to the Sustainable Luangwa Project in Mafinga as they lay down the legal foundation of all environmental and social safeguards to be addressed and respected before, during and after implementation of the project. But the full extent to which specific safeguard issues have to be respected in practice should ideally be determined by provisions of respective sectoral policies, laws and regulations. As regards safeguard processes such as, FPIC, the EMA, 2011 makes the right to be informed as a mandatory requirement of public participation in section *ninety-one*. Members of the public have a right to be fully informed by public authorities to make decisions affecting the environment and available opportunities to participate in such decisions. This is fundamental to the local communities bearing a stake in the Sustainable Luangwa Project in Mafinga District.

An equally pertinent provision that would have an indirect but important effect on the Sustainable Luangwa Project is section *twenty-two*, in which each Minister is obligated to ensure environmental management strategies for his/her respective Ministry are submitted to the Board of ZEMA for approval. This obligation, if well complied with, falls within the general need for establishing and implementing the National Environmental Action Plan (NEAP) under section *twenty-one*. Challenges of conserving headwaters like the Mafinga Hills as the source of the Luangwa River would ordinarily be incorporated into the NEAP submissions for the Ministry of Water Development, Sanitation and Environmental Protection (MWDSEP).

#### **4.2.3 Water Resources Management Act (WRMA, 2011)**

The Act establishes the Water Resources Management Authority (WARMA), and defines its functions and powers regarding the management, development, conservation, protection and preservation of water resources and its ecosystems. The Act provides for three guiding principles underpinning the management, development, conservation, protection and preservation of water resources, i.e. the principles of equitability, reasonability and sustainability. In essence, the fundamental object of water resources management law in Zambia is equitable, reasonable and sustainable utilization of water resources. The subsequent section *six* principles of water resource management all derive from the three parent principles. Within the framework of these principles, the law enforces the Constitutional right of all Zambians by providing for the right to draw or take water for domestic and non-commercial purposes. This includes protection of the right of the poor and vulnerable members of society to have adequate and sustainable source of water free of charge. Additionally, the Act identifies the environment as a user of water, and is second in priority to water for domestic use.

The WRMA, 2011 creates an enabling environment for climate change adaptation using a catchment management approach. As such, the law makes provisions for the constitution, functions and composition of catchment councils, sub catchment councils and water user associations. Because catchments are geographically connected with transboundary river basins, the WRMA Act makes provisions for international and regional cooperation in, and equitable and sustainable utilization of, shared water resources. In that way, the law facilitates the domestication and implementation of basic principles and rules of international law relating to the environment and shared water resources specified in treaties, agreements and conventions to which Zambia is a Party.

The WRMA, 2011 also repeals and replaces the Water Act, 1949 and provides for all matters connected with, and incidental to, the foregoing, particularly, to equitable, reasonable and sustainable management, development, conservation, preservation and protection of water resources. An integral part of equity in water resource utilization includes the recognition of traditional practices in customary areas which practices should be beneficial to water resource management under section *five*, and inclusion of the management of ground water which was missing in the old Act.

Section *three* of the WRMA, 2011 imposes the principle of Universal Sovereignty over Natural Resources by vesting the absolute ownership of all water resources, in their natural state in Zambia, in the President for, and on behalf and benefit of, the Zambian people. Subject to such vestment, a person shall not own any water in its natural state in Zambia, and no property in such water shall be required as an automatic property rights entitlement under sections *four* and *five*. Section *six* substantiates this matter even further by providing that the State shall be the trustee of the nation's water resources, ensuring that water is allocated equitably, sustainably and reasonably. By implication of this, private ownership of water resources is not allowed nor its allocation for use in perpetuity. With vestment of trusteeship in the State, public interest becomes a crucial consideration in allocating water uses while promoting environmental and social values. Foregoing, section *six* provides the fundamental basis for environmental, social and cultural safeguards to be **addressed** and **respected** in the Sustainable Luangwa Project in Mafinga District.

Legal reference to water course in section *two* means a system of surface waters and ground waters constituting, by virtue of their physical relationship, a unitary whole and normally flowing into a common terminus. Another reference to water resource in the law means natural water sources including rivers, spring, hot spring, pan, lake, lagoon, pond, swamp, marsh, stream, watercourses, estuary, aquifer, artesian basin or other body of naturally flowing or standing water. Further reference to water resource protection area, means a catchment, a sub catchment or a geographic area that is declared by the Minister under section *twenty-nine* as a water resource protection area. This section provides discretionary powers for the responsible Minister to declare a catchment and/or a sub catchment as a water resource protection area. This can be done where the WARMA Board is satisfied that special measures are necessary for the protection of a catchment, sub-catchment or geographic area, after consulting any appropriate authority or conservancy authority, operating within the catchment or sub-catchment, recommend to the Minister that the catchment, sub-catchment or geographic area be declared a water resource protection area. By statutory implication, the Sustainable Luangwa Project in Mafinga, and its objective to save the Luangwa River, fundamentally falls under the legal/regulatory ambit of the WRMA, 2011.

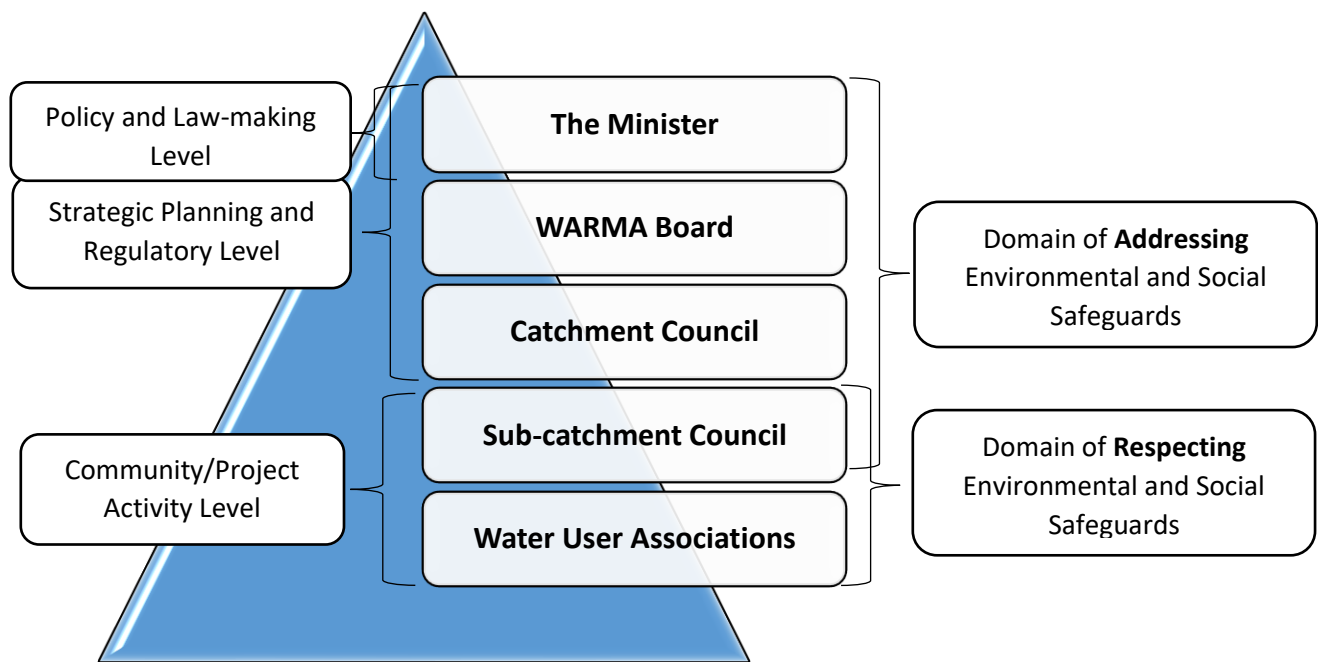
As such, project activities should firstly, draw upon activities of a WARMA approved Catchment Management Plan synchronized with Sub-Catchment Management Plans and secondly, the legality of community

participation in project activities should draw from the statutory powers, duties and functions of a water user association in a sub catchment. Upon approval, a Catchment and/or Sub-Catchment Management Plan becomes a legal instrument and is gazetted binding every person and any water resource and natural resource management development activity to be undertaken in the catchment and/or sub-catchment area under section *thirty-five* and *thirty-six*.

Therefore, given the policy definition of water resource management provided in the National Water Policy, 2010, which policy objective forms an integral part of the object of the WRMA, 2011, and owing to the location of the project in a catchment area and river basin, the Sustainable Luangwa Project is legally a water resources management project by design. This, of course, does not eliminate the requisite collaboration with other relevant authorities responsible for the management and regulation of those attendant problems related to, and connected with, the dangers facing the Luangwa River, i.e. forestry, agriculture and land-use change.

*Water Resources Management Model at Catchment Level*

Figure 4: Functions are to be performed within a statutory institutional framework established by law;



Outside of this formal institutional arrangement, section *forty* provides for reasonable partnership arrangements through memoranda of understandings and joint management arrangements that can practicably be established between WARMA and any other authority or a conservancy authority for securing the proper management of water resources.

In addition, the Minister may, after consultations with WARMA and the Minister for Local Government, delegate the statutory functions of a catchment council or sub-catchment council to the local authority in the area. Consideration of the financial, technical and human resource capacity available to the local authority shall be crucial in making such decisions under section *forty-two*.

The statutory functions, duties and powers of WARMA to exercise control over water resources in Zambia are pertinent to the Sustainable Luangwa Project under sections *eight* and *nine*, not least, and among others;

- i. The conservation, preservation and protection of the environment, in particular, wetlands, quarries, dambos, marshlands and headwaters taking into account climate change and all the challenges it poses,
- ii. Planning for sustainable and rational utilization, management and development of water resources based on community and public needs and priorities, within the framework of national economic development policies,
- iii. Ensuring collaboration with ministries responsible for community development, finance, commerce, agriculture, fisheries and livestock, youth and child development and disaster management and mitigation, that the management and planning of water resources contributes to the eradication of hunger and poverty,
- iv. The provision of access to water resources of acceptable quantity and quality for various uses
- v. Setting of standards and guidelines, with relevant appropriate authorities to be used in undertaking water resource management and developmental activities in a catchment,
- vi. Advising the Minister on matters relating to, and recommending to the Minister policies for, the utilization, development, management, protection, conservation and preservation of water resources and shared water courses,
- vii. Empowering any appropriate authority or conservancy authority to carry out any functions under the Act and utilize its facilities for the better regulation and management of water resources,
- viii. Provision of technical support to catchment councils, sub catchment councils and water user associations,
- ix. Approval of catchment management plans and sub-catchment management plans, and
- x. Ensuring that the right to use water for domestic and non-commercial purposes does not attract any charges.

The proponents of the Sustainable Luangwa Project in Mafinga District should have due regard to sections *seventeen* to *twenty*, in which the Minister has discretionary powers, upon recommendation of WARMA, to constitute a catchment council for catchment management and a sub-catchment council for the management of a sub-catchment. This includes all functions and duties to be performed by the said catchment and sub-catchment councils in respect of water resources management under their respective catchment jurisdictions. It may also be necessary and imperative for the project to pay attention to the needs of section *twenty-four*, in which the Minister has powers, on recommendations of WARMA, to constitute a water user association for any area within the catchment. Because traditional leadership is crucial in the institutional framework of a project that has to operate in a customary area, traditional authority is also an imperative constituency in the composition of a water user association.

That the Sustainable Luangwa Project will be addressing water-use and livelihood activities of the local communities in the Mafinga Hills areas, it is inevitable for the local community to constitute the core of the water user association under section *twenty-five*. Even more important to this element are the functions of the water user association to the project in general.

The statutory functions of a water user associations are hereby outlined.

Table 10: Statutory Function

<b>Statutory functions [Sec.25]</b>
a. Undertaking projects that will ensure catchment protection
b. Monitoring water quality and ensure water resources conservation
c. Collect hydrological, hydro-geological, meteorological, environmental, socioeconomic and water quality and quantity data
d. Facilitate inspections under the Act
e. Promote the participation of the community in water resources management and ensure gender mainstreaming in the decision-making process relating to the use of water
f. Investigate and deal with disputes relating to the use of water
g. Propose local water management plans; and
h. Perform any other function assigned to the association by the sub-catchment council

In extreme cases of water shortages, the Minister is empowered, through the hierarchical institutional structure outlined above, and on recommendations of WARMA, after consultations with the catchment council and the sub-catchment council, declare any area as a water shortage with a view to mobilize water resources in accordance with section *fifty-two*. The decision to make such declaration should be predicated on the following factors (indicated with regards to whether such a factor is applicable [**by tick**] or not [**by cross**] in the Mafinga Project area)

Table 11: Applicability of Legal Measure to the Project Area

<b>Factors [Sec.51, sub sec.1]</b>	<b>Applicable or not</b>
a. The flow of water in any water resource in the area have fallen or is likely to fall below the normal flow of the water resource	✓
b. The flow of water or levels of water in any water storage works in the area has fallen or is likely to fall below the level specified in the permit	x
c. The abstraction of water any boreholes in the area is likely to diminish, unduly, the ground water resources in the area or affect adversely the flow of any surface water in any water resource	x
d. Certain circumstance has brought about shortage of water in the area.	✓

What, then, does the law prescribe in case of declaration of water shortage in an area? And how would this be applicable to the Sustainable Luangwa Project in Mafinga District?

Table 12: Legal Measure Applicability to the Project

<b>[Sec.52, sub sec.1]</b>	<b>Applicable or not</b>
a. Suspend or amend any permits	x
b. Make orders in relation to the use of any water	✓

c. With consent of the Minister and traditional authority, where the area falls within customary land and as provided in the Lands Act, enter or authorize any other person to enter on any land for the purpose of-	✓
i. Using water from any water works, borehole, mine or quarry on land	✓
ii. Sinking boreholes on land and using water from boreholes; and	✓
iii. Conserving the water	✓

Sub section *three* of section *fifty-two* further stipulates that water use in an area declared as a water shortage area shall be prioritized to [all of which would be applicable to the project area in Mafinga];

- a. Domestic and non-commercial purposes of water
- b. Environmental purposes
- c. Municipal purposes; and
- d. Agricultural purposes.

While the Luangwa River is not a shared river like the Zambezi, the Sustainable Luangwa Project in Mafinga District will be domiciled in an inter-state river basin, with tributary water streams flowing into the Luangwa River from Malawi – which stream flows are severely endangered by agricultural activities on the Malawian side of the border. Hence provisions of section *fifty-five* are pertinent to the project idea. It is enacted, firstly, to protect Zambia’s territorial sovereignty over natural resources, including water, while at the same time, recognizing the rights and obligations that derive from treaties, conventions and agreements relating to shared water courses to which Zambia is a State Party. As such, the Minister responsible for water resources may, subject to the Constitution, on behalf of Government –

- a. Enter into bilateral or multilateral agreements with any foreign State or Government relating to any shared water resources,
- b. In cooperation with other riparian States, develop legal instruments, on the advice of WARMA and any appropriate authority that may be required to protect and conserve the water resource.

But insofar as water use under Zambia’s territorial sovereignty is concerned, the law delineates the following categories of permissible water uses in the Republic [with an indication of the extent to which such permissible use applies to the project area in Mafinga District];

According to section *sixty-two*, domestic and non-industrial water use, as the case is in the Mafinga project area, does not require a permit, notwithstanding that this exemption does not confer any ownership right over water resources. However, any construction of water works above the prescribed limits on a water resource for domestic and nonindustrial purpose shall obtain a permit under Part IX. It is not clear whether the unplanned and unregulated farrowing of water streams, which is a dominant part of stream-bank gardening in Mafinga, can be regarded as water works exceeding the permissible limits in accordance with section *sixty-two*? The exemption of such domestic and non-industrial water uses from obtaining permits translates into a *de facto* exemption from regulatory monitoring.

It must be noted also, that the traditional farrows of water artificially created to divert stream water flow from its natural state in the course of irrigating gardens on the banks of streams in the Mafinga Hills are not captured within the parameters of the legal definition of water works.

Meanwhile, water works packaged as part of community projects are required to be approved by the Board in accordance with section *one hundred and seven*, unless the proposed project is approved by the sub-catchment council. This only emphasizes the mandatory and crucial role the sub-catchment council has to play in all water resource management projects at a sub-catchment level.

### **Designation of catchment and sub-catchment**

Section twenty-eight. (1) The Minister shall, by statutory instrument, designate the six catchments of Zambia. (2) The Minister shall, on the recommendation of the Authority, by statutory instrument, designate, any area as a sub catchment. (3) A catchment or sub-catchment designated under this section may lie wholly or partly within a local authority. (4) A catchment and sub-catchment shall, be under the control of a catchment council or sub-catchment council, as the case may be, and under the general supervision and direction of the Authority.

### **Water Resource protection area**

Section twenty-nine. (1) Where the Board is satisfied that special measures are necessary for the protection of a catchment, sub-catchment or geographic area, it may, after consulting any appropriate authority or conservancy authority, operating within the catchment or sub-catchment, recommend to the Minister that the catchment, sub-catchment or geographic area be declared a water resource protection area. (2) The Minister may, on receiving a recommendation under subsection (1), declare, by statutory notice, a catchment, sub-catchment or geographic area to be a water resource protection area. (3) The Minister may, in a statutory notice issued under subsection (2) (a) impose any requirement and regulate or prohibit any conduct or activity in relation to a water resource protection area as may be considered necessary for the protection of the area and its water resources; and (b) make different requirements and regulate or prohibit different conduct or activities in different water resource protection area. (4) The powers conferred on the Minister under this section shall not extend to areas declared, or which may be declared, as protected areas under any other written law.

Section thirty. the Board shall— (a) ensure the protection, conservation and sustenance of the environment; (b) take into account the regulations, standards and guidelines issued by, or under, the Environmental Management Act, 2011, and the Standards Act; (c) ensure that an environmental impact assessment is carried out, where necessary, in accordance with the Environmental Management Act, 2011; (d) respect any national heritage site or monument declared under the National Heritage Conservation Commission Act; (e) collaborate with the appropriate authorities responsible for wildlife, natural resources, tourism and forestry; and (f) ensure the right of access by members of the public to places of leisure, recreation or any natural beauty related to a water resource.

### **Development of Catchment Management plan**

Section thirty-two (1) For the purposes of ensuring the optimum management, development and utilisation of Zambia's water resources, a catchment council shall prepare, in collaboration with the Authority, a catchment management plan. (2) A catchment council and the Authority shall, in preparing a catchment management plan— (a) consult any appropriate authority, conservancy authority and any other stakeholders who are likely to be concerned with the development, conservation, preservation or protection of the catchment or sub-catchment and the utilisation of the water resources; (b) take into account sub-catchment and local water management plans proposed by the sub-catchment councils and water users associations, respectively; (c) draw up an inventory of the water resources of the catchment or sub-catchment; and (d) have regard to any relevant plan prepared under the Town and Country Planning Act and to such other



matters as may be relevant. Water Resources Management No. 21 of 2011 299 Catchment management plan Cap. 283 33. The Minister shall, on the recommendation of the Authority, by statutory instrument, specify what a catchment management plan should contain, including any diagrams, illustrations and maps which shall accompany the plan

According to Section thirty-two, a catchment council shall prepare, in collaboration with the Authority, a catchment management plan (CMP). However, In the case is in the Mafinga project area, the project does preparation of catchment management plan as it is not legally required to do so. Notwithstanding the exemption of CMP does not stop the project to develop water resource protection plan for the strategic and smooth operational of water resources protection Areas. However, it may be necessary that the water resources protection plan lays the foundation for the contents of catchment management plan in accordance with section thirty-three of the Act.

#### **4.2.4 Forests Act NO.4, 2015**

The Forests Act, 2015 repeals and replaces the Forests Act, 1999. It addresses forestry issues which the regulatory framework of forestry could not address from 1973 to 1999 and beyond. In effect, the Forests Act, 2015 establishes and declares National Forests, Local Forests, Joint Forest Management (JFM) areas, botanical reserves, private forests and community forests. The Act makes provisions for the principles and rules for the management of these categories of forests. Essentially, the Act creates an enabling environment for the participation of local communities, local authorities, traditional institutions, non-governmental organizations, the private sector and other stakeholders in sustainable forest management. Broadly, the Forests Act, 2015 provides for the conservation and use of forests and trees for the sustainable management of forest ecosystems and biodiversity.

There is an implicit recognition of forest biodiversity as a crucial element of the sustainability of the global environment. As such, the Act makes provisions for the implementation of international principles enshrined in the United Nations Framework Convention on Climate Change (UNFCCC), the CITES, the Convention on Wetlands of International Importance, especially Water Fowl Habitat, the United Nations Convention to Combat Desertification (UNCCD) in those Countries experiencing Serious Drought and Desertification, particularly Africa, and any other relevant international agreement to which Zambia is a State Party.

Like any natural resource management law in Zambia, section *three* declares the principle of universal sovereignty over natural resources by vesting the absolute ownership of all trees standing on, and all forest produce derived from, customary areas, National Forests, Local Forests, State Land, botanical reserves and open areas in the President, on behalf of the Republic, until lawfully transferred or assigned under the Act or any other written law. By default, this principle sets the regulatory framework that underpins the management of forests in Zambia. Under this framework, the Director of Forestry is mandated with the responsibility of administering the Act and the exercise of the Forestry Department's functions.

Pertinent to the Sustainable Luangwa Project in Mafinga District, the functions of the Forestry Department are stipulated in section *five*, and the extent to which these functions are generally applicable to the project area in Mafinga is indicated in the table below.

Table 13: Functions of the Forest Department and the Level of Applicability to the Project Area

<b>Functions of the Forestry Department [sec.5, sub sec.2]</b>	<b>Applicability to the Project Area</b>
a. Advise the Minister on areas required to be protected as National Forests, Local Forests, botanical reserves or community forests, and on the policies required to ensure conservation and sustainable use of forest resources	<b>3</b>
b. Control, manage, conserve and administer the National Forests, Local Forests and botanical reserves	<b>3</b>
c. Adopt and promote methods for the sustainability, conservation and preservation of ecosystems and biological diversity in forest areas and open areas	<b>3</b>
d. Collect, compile and disseminate information on forest resources in any area and advise on areas requiring afforestation, re-forestation and protection of flora threatened or in danger of extinction	<b>3</b>
e. Establish and promote the establishment of plantations	<b>2</b>
f. Devise and implement participatory forest management approaches for indigenous forests and plantations involving local communities, traditional institutions, non-governmental organizations and other stakeholders, based on equitable gender participation	<b>3</b>
g. Develop and implement public education programs on various aspects of forestry, including indigenous knowledge on sustainable use and conservation of forest resources [...]	<b>3</b>
h. Conduct and support forestry research and development [...]	<b>2</b>
i. Undertake and support adaptive research and development of forest resource management, farm forestry, agroforestry and forest products at regional, national, and local level	<b>2</b>
j. Issue licenses and permits and enter into concessions for the purpose of the Act	<b>2</b>
k. Devise methods for the sharing of costs and benefits from monies obtained from licenses, permits and concessions with local communities and traditional institutions	<b>3</b>
l. Develop mechanisms for monitoring the use of forest resources and developments in the forestry sector and for monitoring and evaluating forest resources	<b>3</b>
m. Promote sustainable utilization of forest resources for the development of the national economy	<b>2</b>
n. Establish and operate effective and systematic management of financial, human and natural resources for the conservation of natural resources	<b>3</b>
o. Take appropriate measures in consultation with the Zambia Environmental Management Agency, to safeguard protected species against extinction and control and prevent the introduction of invasive alien species in forest areas	<b>2</b>

p. Promote and regulate bee-keeping	<b>3</b>
q. Cooperate and consult with other public institutions whose powers and functions impact on this Act	<b>3</b>
r. Facilitate equitable access to forest resources for the commercial, recreational and indigenous use	<b>3</b>
s. Liaise or interface with similar organs in other countries or international institutions dealing with forestry conservation and management.	<b>3</b>

[1 = not applicable: 2 = slightly applicable: 3 = very applicable]

The implementation of these functions is to be undertaken under the guidance of a set of principles stipulated in section *eight*.

- a. The inter-generational principle that forests and trees shall be managed as an asset for succeeding generations
- b. The precautionary principle that the management, conservation, preservation and utilization of forest ecosystems, biodiversity and habitats takes into account the best scientific evidence available
- c. The ecological principle that the development, management, utilization and conservation of forests and trees achieve a sound ecological balance
- d. The sustainable development principle that stressing the need to achieve optimum utilization and ecologically sustainable development and management of forest ecosystems, biological diversity and habitats
- e. The intra-generational equity principle emphasizing the need to conserve forests and trees as living resources for both present and future generations and to achieve economic growth, human resource development and employment opportunities
- f. The principle of integrated management emphasizing the need to protect biological diversity in forest areas and protect the ecosystems as a whole, including species which are not targeted for exploitation
- g. The need to sustain the potential yield of economic, social and environmental benefits derived from forests
- h. The need to promote the fair distribution of the economic, social health and environmental benefits derived from forests
- i. The need to minimize pollution of natural resources, especially forests, land and water
- j. The need to develop and manage forests so as to conserve heritage resources and promote aesthetic and cultural values
- k. The need to achieve to the extent practicable a broad and accountable participation in decision making processes provided in the Act

These principles lay the foundation for much of the environmental safeguards which may also be applicable in the Mafinga Project area.

Given the fact that the Sustainable Luangwa Project in Mafinga District involves the need to protect the Mafinga Hills NFR, provisions of section *ten* on the establishment of National Forests are pertinent. Particularly, provisions of section *twelve* relating to all land in a National Forest may have material effect on the project, i.e. such land shall be used for-

- a. The security of resources of national importance
- b. The conservation of ecosystems and biological diversity

- c. Improved forest resource management and sustainable utilization of forest resources; and
- d. The management of major water catchments and head waters, subject to the Water Resources Management Act, 2011.

The Forests Act, 2015 hereby makes indication of the fact that a water resource management and conservation project aimed at protecting major water catchments and headwaters, as the case is with the Sustainable Luangwa Project in Mafinga, falls under the legal jurisdiction of the Water Resources Management Act, 2011.

However, access into a protected National Forest area is not strictly prohibited. Section *thirteen* grants rights of easements or profit claims which may reasonably be claimed over the area declared as a National Forest through a Presidential prerogative. Meanwhile, the Director of Forestry is directly responsible for the management and control of National Forests in accordance with section *fourteen*. Therefore, any interests and/or claims in relation to an area delineated as a National Forest must be made through the Director of Forestry in accordance with section *fifteen*. This includes any interest to enter into a National Forest, which requires a permit obtainable through stipulated procedure from the Director of Forestry in accordance with section *sixteen*. The same level of control and management applies to a Local Forest in accordance with sections *seventeen* to *twenty-one*. For a Local Forest, however, a local authority in the area has the discretion to apply to the Minister for permission to control and manage a Local Forest within the local government jurisdiction of that local authority.

In a community area like Mafinga Hills, sections *twenty-nine* to *thirty-one* may be imperative considerations. The law provides for community forest management which may be executed by formation of a community forest management group, to be constituted by persons who are (i) members of a village in or near a forest, (ii) managing a forest or part of a forest, or (iii) desirous of managing a forest or part of a forest. The community forest management group shall be formed for no other purposes but for the purpose of communal control, use and management of a forest, guided by the following principles – which also set the foundation for environmental and social safeguards in community forest management.

Table 13: Legal Measures

<b>Section 29(3)</b>
a. Persons living in close proximity to or deriving their livelihood from or having strong traditional ties to the forest shall be given an opportunity to join a community forest management group
b. The purposes for which a community forest management group is formed shall be implemented to promote sustainable management of forest ecosystems and biodiversity
c. The purposes for which a community forest management group is formed shall be explained to all persons wishing to join the community forest management group
d. The management of a community forest management group, the management of any funds and the selection of leaders of a community forest management group shall be based on transparency, fairness, impartiality and non-discrimination

e. Members of a community forest management group shall be encouraged to participate in the management of the community forest management group
f. Procedures for members of a community forest management group or guidelines regulating the conduct of members of the community forest management group shall be based on, and conducted in accordance with, the principles of natural justice

In all the community forest management processes, the consent of the local chief is mandatory in accordance with section *thirty*. Meanwhile, the details of all regulatory requirements for the full establishment, registration and legal recognition of a community forest management group, the community forestry agreements, duties and functions of the community forestry management, group, scope of work and the procedural mechanism to acquire community forest management rights and obligations from the Director of Forestry are stipulated in the Community Forest Management Regulations of 2018.

However, the community forest management agreements, rights and obligations established between the Board of the community forest management group and the Director of forestry are not absolute. Section *thirty-three* gives the Minister discretion, in consultation with the Director of forestry, to terminate a community forest management agreement or to withdraw particular user rights granted under the community forest management agreement when it is deemed necessary to do so in specified circumstances. For a community-based project like the Sustainable Luangwa, a Forest Management Plan (FMP) will be an important tool for the conservation and management of forest resources. An FMP is a technical/management tool on the one hand and a legal/enforcement/compliance tool on the other hand. All sustainable forest management and forest conservation provisions must be implemented through an FMP. As such, section *forty* mandates that the preparation of an FMP be inclusive and participatory to involve the local authority, local community, Chief, and any other relevant stakeholder in accordance with the purpose for which the forest area is established under the law. The FMP becomes a legally-binding instrument upon its publication, by the Minister, in the gazette. Therefore, it is conceivable that some project activities under the Sustainable Luangwa Project in Mafinga may have to be synchronized to a FMP in order to bear a binding compliance requirement.

**4.2.5 The Forest Regulations (Community Forest Management) Regulations, 2018 [Statutory Instrument No.11, 2018]**

The Community Forest Management (CFM) Regulations provides subsidiary rules to implement the Forests Act No.4, 2015; generally, in exercise of section *one hundred and five* and particularly, sections *twenty-nine* to *thirty-one*. In these regulations, the local authority is empowered to identify, support and encourage local communities to apply to the Director of Forestry for control, use and management of forests for the purpose of social, cultural and economic needs. Subject to regulation three, community forest management is only permissible in (i) open forest areas, (ii) local forests and (iii) game management areas. The regulations also prevent resource tenure conflicts between community forestry and commercial forest concessions and saw milling interests, by directing that an area proposed for community forest management shall be free from a forest concession and/or a saw milling license. The third regulation further provides an important safeguard that members of a community forest management group shall consist of citizens who reside in the community area, and have resided in the area for at least for 2 years.

A community forest management group is a legally recognized rights holder over a community forest but this right must be applied for to the Director of Forestry in the manner and form prescribed in regulation *six*. The

consent of the local chief is an imperative part of the procedure to acquire these rights and recognition. The Director of Forestry must be satisfied, according to the criteria set out in regulation *seven*, in order to accept the application for community forest management. Otherwise, the Director of Forestry reserves the rights and power to reject an application that does not meet the prescribed requirements.

Should community forest management rights be granted by the Director of Forestry, regulation stipulates that a community forest management area shall be for the exclusive use of the local community represented by the community forest management group. As such, the community forest management group is granted resource tenure rights to manage, protect, access and restrict access to the community forest. Other than these rights, a legally recognized community forest management group bears the duties, obligations and responsibilities to carry out field appraisals and socioeconomic surveys in targeted community forests in accordance with regulation *ten*. Knowing how technical this obligation is, the local authority and the Director of forestry may assist the community forest management group in undertaking the tasks.

A recognized community forest management group is expected, within 90 days of its legal recognition, to enter into a community forest management agreement with the Director of Forestry in the manner and form prescribed according to regulation *eleven*. This is such a mandatory requirement that the Director may revoke the recognition if an application for the community agreement is not received within the stipulated time. An application to enter into community forest management agreement shall be accompanied by-

- a. A community forest map showing the boundaries of the community forest area that has been consented to or signed by representatives of concerned neighbouring communities, Ward Development Committees, and the Chiefs, within the area proposed for community forest management; and
- b. A community forest management plan which is in accordance with sustainable forest management principles that includes a set of community rules and measures that support proper management of the community forest; [effectively, a community forest management plan becomes both a technical/management tool and a legal enforcement/compliance tool for sustainable forest management at community level].

A community forest management group has a right to assign all or some of its rights under a community forest management agreement to any other person or group, but the community forest management group has no right to transfer or assign its rights without permission from the Director of Forestry. This permission is obtainable through an application to the Director in the prescribed form and manner in accordance with regulation *seventeen*. Essentially, the CFM Regulations serve two primary purposes; (i) establish and enforce the principle of community forestry in practice, and (ii) confer resource tenure rights over community forest management, and the procedural mechanisms for obtaining these rights.

#### **4.3 WWF Safeguards Standards and Procedures**

For the purposes of the Sustainable Luangwa project implementation, the principles and procedures of the WWF SIPP shall prevail in all cases of discrepancies.

*WWF Safeguards Standards and Procedures*

WWF's safeguards standards require that any potentially adverse environmental and social impacts are identified, mitigated or avoided. The following Safeguards policies are relevant to this project:

*Standard on Environment and Social Risk Management*

This standard is applicable to Sustainable Luangwa project because the project intends to support activities that may result in a variety of environmental and social impacts. Sustainable Luangwa being a conservation project naturally is expected to be with no or absolutely limited environmental and social impact and that its outcomes are expected to be generally positive. However, based on the risk assessment conducted at the level of screening and scoping stages of environmental and social safeguards, the adverse environmental and social impacts that may occur as a result of project activities implementation are expected to be site and area-specific, generally negligible and easily mitigated.

The precision and location of specific activity impact of the project cannot be determined at this stage and will only be known during project implementation stage. Thus, the ESMF was prepared to set out guidelines and procedures on how to identify, assess and monitor environmental and social impacts and how to avoid or mitigate adverse impacts. Based on principles and guidelines of the ESMF, site-specific ESMPs will be prepared as may be required.

*Standard on Protection of Natural Habitats*

WWF's mission entails protection of natural habitats, which means, the organisation entrenches its principles in not undertaking any projects that would result in land degradation and destruction of critical natural habitats, especially those that are legally protected, officially proposed for protection, or identified as having high conservation value. Basically, Sustainable Luangwa is a landscape intervention project for securing Luangwa's water resources for shared socioeconomic and environmental benefits through integrated catchment management. Which means the landscape provides ecosystem services and livelihood support to communities. Moreover, the mainstay of communities in Mafinga is agriculture and small livestock, which are directly dependent on natural habitat. Overall, Sustainable Luangwa project activities will produce significant conservation benefits. Any potential adverse environmental impacts on communities or the environment must be mitigated. Important areas in the project area includes forests, grasslands and other natural habitats as indicated in the environmental baseline section of this report. However, the ESMF/PF is prepared to properly manage the risks of any unforeseen adverse environmental impact on natural habitats, including critical natural habitats, as well as measures to enhance the project's positive environmental outcomes.

*Standard on Restriction of Access and Resettlement*

The WWF Standard seeks to ensure that adverse social or economic impacts on resource-dependent local communities as a result from conservation-related restrictions on resource access and/or use are avoided or minimised. Resolution of conflicts between conservation objectives and local livelihoods is sought primarily through voluntary agreements, including benefits commensurate with any losses incurred. Involuntary resettlement is avoided or minimized, including through assessment of all viable alternative project designs and, in limited circumstances where this is not possible, displaced persons are assisted in improving or at least restoring their livelihoods and standards of living relative to pre-displacement or pre-project levels (whichever is higher).

Sustainable Luangwa project is expected to have no human resettlement particularly involuntary. Land acquisition or physical displacement will be avoided in this project area. It shall avoid other forms of economic resettlement (e.g., restrictions of access to natural resources and livelihoods, loss of community property resources, land use conflicts, etc.) will be discouraged under the project. However, if such resettlement impacts are unavoidable, mitigation measures will be taken to reduce and mitigate such impacts, in accordance with the guidance provided in the ESMF/PF.

#### *Standard on Indigenous Peoples*

The WWF standard requires ensuring that community rights are respected, that community members do not suffer adverse impacts from projects and that community members receive culturally appropriate benefits from conservation. The policy mandates that project to respect community rights, including their rights to FPIC and community consultation and to tenure over traditional territories; that culturally appropriate and equitable benefits (including from traditional ecological knowledge) are negotiated and agreed upon with the communities in the area and that potential adverse impacts are avoided or adequately addressed through a participatory and consultative approach.

Although different ethnic groups exist in the area, as a precautionary approach, the Standard on indigenous people is triggered as there are community groups that might be considered to benefit within the definitions of indigenous present in the project landscape. Their rights will be protected. In order to ensure that all PAP take an active part in the design and implementation of project activities, the implementation of the ESMF/PF will be done in a participatory and inclusive manner, and based on principles equitable community consultation, as required in the ESMF/PF.

#### *Standard on Community Health, Safety and Security*

This Standard ensures that the health, safety and security of communities are respected and appropriately protected. The Guidance on Labour and Working conditions requires employers and supervisors to implement all reasonable precautions to protect the health and safety of workers through the introduction of preventive and protective measures. Project activities should also prevent adverse impacts involving quality and supply of water to affected communities; safety of project infrastructure, life and properties; protective mechanisms for the use of hazardous materials; disease prevention procedures; and emergency preparedness and response.

#### *Standard on Pest Management*

The project will not allow the procurement or use of formulated products that are in World Health Organisation (WHO) Classes IA and IB, or formulations of products in Class II, unless there are restrictions that are likely to deny use or access by lay personnel and others without training or proper equipment. The project will follow the recommendations and minimum standards as described in the United Nations Food and Agriculture Organisation (FAO) International Code of Conduct on the distribution and use of pesticides and its associated technical guidelines, and procure only pesticides, along with suitable protective and application equipment, that will permit pest management actions to be carried out with well-defined and minimal risk to health, environment and livelihoods. The Project will not fund nor include the promotion or usage of pesticides. On the contrary, it will aim to reduce the number of chemical fertilizers and pesticides used through strengthening of farmer capacity on the proper use of chemicals/ non-chemical alternatives for pest



management (e.g., integrated pest management and good agriculture practice.). Thus, this standard is not triggered by the project.

#### *Standard on Cultural Resources*

This standard requires that cultural resources (CR), which include archaeological, paleontological, historical, architectural, and sacred sites (e.g., graveyards, burial sites, sites of unique natural values) are appropriately preserved and their destruction or damage is appropriately avoided. Project activities are not expected to negatively impact cultural resources (CR). Project activities will contribute to strengthening the sanctity of CR through integrated conservation actions. To avoid or at least mitigate any adverse impacts on CR, the project will not finance activities that could significantly damage CR. The project management unit will also consult with local people and other relevant stakeholders in documenting the presence and significance of CR, assessing the nature and extent of potential impacts on these resources, and designing and implementing mitigation plans.

#### *Standard on Accountability and Grievance System*

Project-affected communities and other interested stakeholders may raise a grievance at any time to the Project team and WWF. The PMU will be responsible for informing the project-affected parties about the Accountability and Grievance Mechanism. Contact information of the PMU and WWF will be made publicly available. Relevant details are also provided in the Grievance redress section of this ESMF/PF. The WWF Standard on accountability and Grievance Mechanism is not intended to replace project and country-level dispute resolution and redress mechanisms. This mechanism is designed to: address potential breaches of WWF's policies and procedures; be independent, transparent, and effective; be accessible to project-affected people; keep complainants abreast of progress of cases brought forward; and maintain records on all cases and issues brought forward for review.

#### *Standard on Public Consultation and Disclosure*

This Standard requires meaningful consultation with relevant stakeholders, occurring as early as possible and throughout the project cycle. It requires the Project team to provide relevant information in a timely manner and in a form and language that are understandable and accessible to diverse stakeholders. This standard also requires that information concerning environmental and social issues relevant to the project is disclosed for at least 30 days prior to implementation. WWF will disclose safeguards documentation on its safeguard's resources web page. The final safeguards documents should be published on national websites of the implementing Agencies and made available locally in specific locations. The Project is also required to locally release all final key safeguards documents via hardcopy, translated into the local language and in a culturally appropriate manner, to facilitate awareness by relevant stakeholders that the information is in the public domain for review.

#### *Standard on Stakeholder Engagement*

These standard details the necessary requirements for meaningful, effective and informed stakeholder engagement in the design and implementation of projects. The project has prepared a stakeholder engagement plan that will be implemented during the project execution in the area with all stakeholders.

#### **4.4 Gaps between Zambia's laws and policies and the WWF SIPP**

In general, Zambian Laws, policies and guidelines are in line with the WWF's environmental and social safeguards requirements. However, there are a few differences between the two systems, as discussed below. In all cases of conflict or incongruity, the requirements of the WWF safeguards will prevail, for the purpose of resolving the Sustainable Luangwa project conflict with stakeholders, in accordance with Zambian Laws.

With regard to environmental impacts, there are no direct contradictions between Zambian Laws and regulations and the WWF's SIPP, but the requirements of the latter are more extensive. For instance, WWF's SIPP requires a thorough environmental and social analysis of the impact of specific project activities on the environment and on local communities before the activity is formally approved and any funds are disbursed. These requirements are beyond the environmental clearance process prescribed by the Zambian environmental legislation. All project activities should fully comply both with the Zambian Laws and regulations on the Environmental Clearance of Projects and with the procedures and mitigation measures prescribed in this ESMF/PF. In case that the WWF's SIPP requirements are more extensive, specific to the area, strict, or detailed than the Zambian Legislation and policies that apply to the whole country as a jurisdiction, the former will apply to all activities.

With regard to social impacts, the primary discrepancies between Zambian Laws and regulations and the WWF SIPP refer to the status of customary land and resource tenure rights and the commitment to participatory decision-making processes. First, according to the WWF SIPP, all users of land and natural resources (including people that lack any formal legal ownership title or usage rights) are eligible to some form of assistance or compensation if the project adversely affects their livelihoods. The Zambian Laws only recognize the eligibility of land owners or formal users to receive compensation in such cases. Second, both the WWF SIPP and Zambian legislation require consultations as part of the development of safeguards documents and during project activities - however the former has more extensive and detailed requirements than the latter.

Therefore, for the purposes of Sustainable Luangwa project, the provisions of WWF SIPP shall prevail in accordance with Zambian Laws in this project in cases of discrepancy and conflict with right holders.

## **5. PROJECT INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS**

### **5.1 Overview of Implementation Arrangements**

The proposed executing structure (Figure 7) includes WWF as the GEF Agency, the Ministry of Green Economy and Environment (MoGEE) as Lead Executing Agency and WWF Zambia Country Office (WWF ZCO, a program office of WWF International) to provide technical support for delivery of outputs as well as financial and administrative management. On behalf of government with approval from the project National Steering Committee (NSC), WWF-ZCO will sub-grant to potential project delivery partners. MoGEE and WWF ZCO will carry out due diligence of sub-grant partners to review past performance and profiles, develop detailed work plans and budgets to be reviewed and approved first by MoGEE and WWF ZCO, and then by the GEF National Steering Committee. Contracts will then be developed with each sub-grant partner, countersigned by the partner, WWF ZCO and MoGEE.

### 5.1.1 Project Management Unit

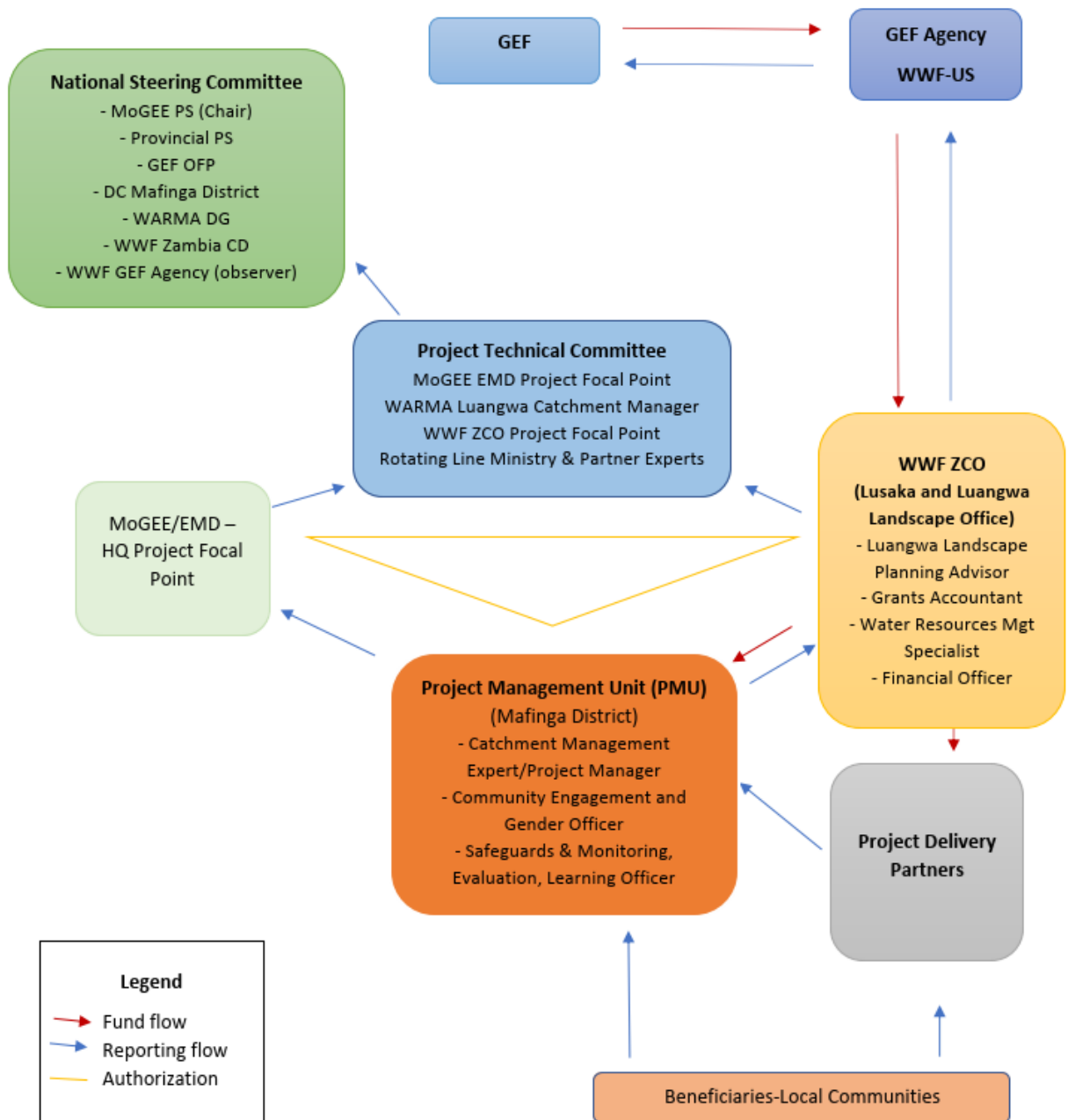
A Project Management Unit (PMU) will be established to undertake day-to-day operations and coordination of the project. The PMU based in Mafinga shall comprise of 3 full-time permanent staff to be recruited competitively: (1) the Catchment Management Expert/Project Manager, (2) Community Engagement and Gender Officer, and (3) Safeguards & Monitoring, Evaluation and Learning Officer. The PMU will be housed by the existing government structures in Mafinga District. It will administratively and technically report to and be accountable to the MoGEE/EMD-HQ and will coordinate with the Grants Accountant in WWF Zambia. MoGEE and WWF shall counter-sign all necessary authorisations. The funds will flow from WWF Zambia office to the PMU and to the partner institutions implementing project activities, according to WWF procedures.

The PMU will be responsible for: (i) preparing the overall project work plan; (ii) preparing annual budgets and work plans; (iii) managing project expenditure in line with these annual budgets and work-plans; (iv) recruiting additional partner institutions and specialist support services to implement outputs and activities; (v) ensuring technical quality of products, outputs and deliverables; (vi) producing quarterly expenditure and cash advance requests from project partners; (vii) reporting to the Project Technical Committee (PTC), National Steering Committee (NSC) and the WWF GEF Agency on project delivery and impact via Progress Reports; and (viii) liaising and working closely with all partner institutions to link the project with complementary national, regional and local programs and initiatives.

### 5.1.2 GEF Agency Oversight

WWF-US, through its WWF GEF Agency will: (i) provide consistent and regular project oversight to ensure the achievement of project objectives; (ii) liaise between the project and the GEF Secretariat; (iii) ensure that both GEF and WWF policy requirements and standards are applied and met (i.e. reporting obligations, technical, fiduciary, M&E); (iv) approve budget revisions, certify fund availability and transfer funds; (v) organize the final evaluation and review project audits; and (vi) certify project operational and financial completion.

Figure 5: Project Executing Structure



Abbreviations: PS-Permanent Secretary, CD – Country Director, DC – District Commissioner, DG – Director General, WWF ZCO – WWF Zambia Country Office

## 5.2 Implementation arrangements

### 5.2.1 Project Technical Committee

A Project Technical Committee (PTC) will be constituted to provide technical expertise and inter-sectoral coordination at national level. The composition of the PTC shall include a focal point from the Environmental Management Department of MoGEE, Luangwa Catchment Manager from WARMA and a focal point from WWF ZCO as permanent members, with technical experts from other line ministries and partners brought in as project needs arise. This committee will review the Annual Work plan and Budgets, Procurement Plan and Annual Progress Reports for submission to the National Steering Committee for review and approval.

#### 5.2.2 National Steering Committee

A National Steering Committee (NSC) will be constituted to serve as the project oversight, advisory and high-level decision-making body for the project. The core members of the NSC will include MoGEE Permanent Secretary (Chair), Provincial Permanent Secretary (co-chair), GEF Operational Focal Point, District Commissioner of Mafinga District, Director General of WARMA, WWF Zambia Country Office Director, and WWF GEF Agency as an observer. Other members shall be co-opted from the government line ministries, cooperating partners, NGOs, CBOs and other institutions as project needs arise. The NSC will ensure that the project remains on course to deliver the desired outcomes of the required quality. The NSC provides overall guidance and policy direction to the implementation of the project and provides advice on appropriate strategies for project sustainability. The NSC will play a critical role in project monitoring and evaluation by assuring quality of project processes and products. It also advises on any conflicts within the project or to any problems with external bodies.

#### 5.2.3 Implementing Agency

WWF-US, through its WWF GEF Agency will: (i) provide consistent and regular project oversight to ensure the achievement of project objectives; (ii) liaise between the project and the GEF Secretariat; (iii) ensure that both GEF and WWF policy requirements and standards are applied and met (i.e. reporting obligations, technical, fiduciary, M&E); (iv) approve budget revisions, certify fund availability and transfer funds; (v) organize the final evaluation and review project audits; and (vi) certify project operational and financial completion.

#### 5.2.4 WWF Zambia Country Office (ZCO)

The WWF Zambia Country Office (ZCO) will handle the financial administration and management on behalf of the Ministry of Green Economy and Environment, and will provide technical support to the delivery of outputs under Components 1, 2 and 3. Financial and administrative project management: based on the consultations and assessments done for identifying the most appropriate institutions to undertake financial and administrative project management on behalf of MoGEE. WWF Zambia is the only agency willing, with the capacity and stake in the project, and with robust financial structures, procurement systems, policies and procedures that meet the GEF's minimum fiduciary standards, to fulfil this role.

#### 5.2.5 Technical Delivery of Outputs by Sub Grant Partners.

COMACO and WECSZ are identified as potential sub-grant partners in outputs related to climate-smart conservation agriculture and awareness raising activities. However, consultations with WECSZ and COMACO identified that they do not have expertise on WRPAs. WWF Zambia is one of the few NGOs working in the Luangwa Catchment on community-based natural resource management and protected area management.

It's an organization that has the technical expertise and experience working on Forestry policy and governance at national and local levels and leading Water Resource Protected Area work with government.

#### 5.2.6 WWF Zambia will provide technical support to the PMU:

The Grants Accountant will do financial management support for activities implemented by the PMU including budget development and monitoring, producing timely and quality reports for the WWF GEF Agency and reconciliation of activities and their close out. The staff will ensure activities are implemented in compliance with both WWF and GEF policies and requirements. The accountant will work closely with Sub-grantees to manage and monitor the sub-grants and ensure that efficient accounting and finance systems exist that will accord maximum support as well as act as a platform for providing sound financial information to the Project executors, implementors and donor.

The Luangwa Landscape Planning Advisor will provide support to the PMU to develop technical scopes of work, terms of reference, plans and partnerships to implement project outputs, with technical inputs to develop the planning for Mafinga Hills NFR; the WRPA development process, land cover land use (LCLU) surveys, and ecological and socio-economic assessments, citizen science networks for monitoring river health, drafting of Nature Based Solutions concept notes, and to develop desired landscape scenarios and engage with the local government, traditional leaders and communities to negotiate a designed outcome. Support the PMU to design a roadmap to create the participatory landscape management plans (PLMPs) and support the drafting of the PLMPs. Facilitate and engage in strategic advocacy activities, representing the project on high governmental and traditional authority levels within the wider Luangwa Landscape; and provide comprehensive CBNRM (Community-Based Natural Resource Management) and social development guidance to the project on strengthening relationships, market-based incentives and community influence over the equitable and sustainable management of natural resources.

The Water Resources Specialist will provide GIS expertise including mapping to boundary demarcations for Mafinga Hills NFR and the WRPAs. In addition, the Specialist will be part of the WRPA technical team and will provide support for the data and information collection for the water resource/hydro-geomorphology surveys, and surface water infrastructure assessments. WWF has been at the forefront of supporting the government of Zambia on identifying and mapping potential WRPAs. As a partner to WARMA and MWDSEP, WWF has led the efforts for this ground-breaking pilot initiative in Zambia and brought in international expertise from the network to advise on how to operationalize/roll out WRPA implementation. As this work is being done for the first time in Zambia, WWF Zambia produced the first hydrological atlas (Hydro ATLAS-Zambia), the data for which have been used to inform the Water Resource Protection Area (WRPA) assessment conducted by WARMA and WWF-Zambia in 2019. For more information and all Hydro ATLAS-Zambia data related to this project please visit <https://wrpa-zambia.weebly.com/>.

#### 5.2.7 Safeguards implementation

Specific arrangements and responsibilities related to the implementation of environmental and social safeguards requirements, as stated in this ESMF/PF are as follows:

**Lead Executing Agency (MoGEE)** with Overall responsibility for ensuring environmental safeguards are implemented.

**Project National Steering Committee:**

- (i) Overall oversight and monitoring of compliance with safeguards commitments and obligations.
- (ii) Support and specific recommendations on specific safeguard issues where necessary.

**WWF GEF Agency**

- (i) Overall oversight and monitoring of compliance with safeguard commitments, duties and obligations.
- (ii) Support and provide specific recommendations on specific safeguard issues if needed.

**Project Management Unit (PMU)**

- (i) Ensuring that bidding documents and contracts include any relevant particular clauses or conditions relevant to environmental and social safeguards as set out in this ESMF. It is particularly important to include in bidding documents requirements related to occupational health and safety.
- (ii) Implementing and supervising ESMF, SEP and other safeguard plans
- (iii) Provision of safeguard reports to the Executing Agency
- (iv) Supervision of Safeguards & Monitoring, Evaluation and Learning Officer
- (v) Implementation of Grievance Redress Mechanism (GRM)
- (vi) Disclosure of safeguard documents
- (vii) Reporting on safeguards implementation and compliance to the PSC and WWF GEF Agency.

**Safeguards & Monitoring, Evaluation and Learning Officer**

- (i) Overall responsibility for compliance with ESMF safeguards and other annexed documents of this report
- (ii) Ensuring the inclusion of safeguards requirements in all project bidding documents and contracts.
- (iii) Monitoring contractors' compliance with safeguard requirements
- (iv) Conducting consultation meetings with local stakeholders as required, informing them, updating them on the latest project development activities
- (v) Carrying out regular site inspections
- (vi) Reporting on safeguards implementation and compliance to the PMU Project Manager/Catchment Management Expert
- (vii) Ensuring implementation of the Grievance Redress Mechanism (GRM) and dissemination of information regarding the GRM among local communities.
- (viii) Review annual work plans and budgets and analyses, planned community/ individual sub-projects by sub-grant partners and their environment / social impacts, in order to identify safeguards risks and initiate safeguards
- (ix) Prepare and contribute to safeguards documents as necessary in accordance to the ESMF/PF and in close collaboration with the PMU and Community Engagement and Gender Officer.
- (x) Ensure that consultations with communities are carried out in inclusive and participatory manner, and are well documented
- (xi) Monitor the state of safeguards implementation, and ensure that sub-projects are implemented in accordance to best practices and guidelines set out in the ESMF/PF
- (xii) Provide oversight and coordinate the socio-economic surveys to identify project affected people

- (xiii) Identify and liaise with all the stakeholders involved in environment and social related issues in the project
- (xiv) Operate the project's Grievance Redress Mechanism (GRM), including compiling and reporting on project-related grievances, monitoring grievance resolution, and closing the feedback loop with the complainant.
- (xv) Carry out field visits as necessary to monitor the implementation of project activities and their compliance with safeguard requirements
- (xvi) Provide capacity support to the PMU and other project related stakeholders on environmental and social issues
- (xvii) Provide execution assistance and advise the project manager as necessary on safeguards related issues including adaptive management.
- (xviii) Report on overall safeguards performance to the project steering committee, WWF GEF Agency and other stakeholders as necessary



## 6. ANTICIPATED ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

This Environmental and Social Management Framework (ESMF) provides safeguard actions aimed at mitigating identified social and environmental risks through the implementation process of the Sustainable Luangwa project. The ESMF has been developed following: first, the analysis of the screening results of the project based on general project risks, human rights related risks, resource efficiency, pollution prevention and management of chemicals and waste related risks, climate change risks, local community wellbeing/livelihoods related rights and cultural resources protection. Secondly, the ESMF takes into account the results of the environmental and social risk assessment of the screened project activities. The ESMF forms an integral part of the project activities that guarantees the integration of environmental and social concerns into the project document and its implementation framework.

**TABLE 14: PROJECT RISK ASSESSMENT AND MITIGATION PLAN**

<b>Overall Project ESS Risks</b>						
<b>Key area of Concern:</b>	<b>Community Response</b>	<b>Potential Risks and Adverse social Impacts</b>	<b>Mitigation Measures</b>	<b>Targeted Groups</b>	<b>Budget</b>	<b>Responsible Party</b>
<p><b>Conflict Sensitivity: Land and resource tenure rights</b> (What are some of the customary rights related to land and natural resources allowed to be enjoyed by communities in the traditional land in the Mwenechifungwe and Mwenewisi Chiefdoms?)</p>	<p>Our land tenure allows settlement. It allows the communities to use forests, water, soil and land, harvesting any resources, to farm and fish. Rights to Land Ownership and to control resources on the land and preserve them for the future and family members for inheritance (Land in this chiefdom traditionally belong to the families and their ancestors)</p>	<p>(i) The community's exercise of land and resources rights and the project trying to restrict some rights in specific areas. This is the conflict of enjoying customary resource tenure rights vs the project instituting activities that curtail access to some resources.</p> <p>(ii) The lack of clarity regarding resource tenure rights even where natural resources are legally transferred to the community is a risk for natural resource management in general and for</p>	<p>(i) Need to examine laws around tenure rights, forestry and CFMG to determine the level of risk to community tenure rights that the project may impose and if any access restriction, need to determine adequate mitigation measures. See Process Framework in Chapter 8.</p> <p>(ii) Project design needs to clarify tenure rights by building a specific training on land and resource tenure rights to assist communities understand the implications of some activities</p>	<ul style="list-style-type: none"> <li>▪ Communities</li> <li>▪ Civic leaders</li> <li>▪ Chiefs Reps</li> <li>▪ Village heads</li> </ul>	<p>USD 7,000 &gt;&gt; These issues should be covered in the ESMF/PF at design stage therefore no additional costs during implementation &gt;&gt; No additional costs</p>	<p>PMU/MoGEE/WWF/ with the Knowledge specific expert</p>

<b>Overall Project ESS Risks</b>						
<b>Key area of Concern:</b>	<b>Community Response</b>	<b>Potential Risks and Adverse social Impacts</b>	<b>Mitigation Measures</b>	<b>Targeted Groups</b>	<b>Budget</b>	<b>Responsible Party</b>
		<p>the project in particular.</p> <p>(iii) Lack of tenure arrangements of traditional land and confusion surrounding it might negatively impact some project outcome 2.1 activities in the buffer Zone.</p> <p>iv) Potential displacement of farmers making use of streambanks to grow crops outside the riparian buffer zones on potentially less fertile / more sloping lands (ie the impact of the project on the farmers).</p>	<p>and opportunities for the project.</p> <p>(iii) Alternatives and an incentive system must be made clear to the communities through a consultation process.</p> <p>(iv) See Process Framework in Chapter 8.</p> <p>(v) The project must build in participatory and conflict resolution processes into project implementation to minimize this risk. This will be captured in the grievance redress mechanism.</p>			
<b>Elite Capture Risks</b>	As communities we have to remind	Management of community forests	(i) The project needs to avoid	Communities, Civic Leaders	USD 4,000	PMU/MoGEE/WWF

Overall Project ESS Risks						
Key area of Concern:	Community Response	Potential Risks and Adverse social Impacts	Mitigation Measures	Targeted Groups	Budget	Responsible Party
How do we avoid risks of elite capture or individualization of resource rights and inequalities in terms of benefits sharing related to protection of natural habitat and CFMG to avoid resource use conflicts?	those people in political leadership that natural resources in these communities belong to all of us and if there are benefits that arise from these resources, we all have to benefit equally and avoid problems of resource use conflict that comes with elite capture related to the project.	is at risk of elite capture and inequitable benefit sharing; also risks related to protection of natural habitat, land degradation.	<p>elite capture in terms of project beneficiaries at the district and community level by developing benefit sharing agreements</p> <p>(ii) Asking trusted community members such as religious leaders, senior citizens, etc., who the most disadvantaged people are and inviting those people specifically to meetings and events</p> <p>(iii) Working with women's groups, women-led cooperatives or female leaders such as headwomen to plan project activities that</p>		>> Project benefit sharing strategy needs to be defined in ESMF/PF and SEP at this stage – >> no additional cost during implementation	

Overall Project ESS Risks						
Key area of Concern:	Community Response	Potential Risks and Adverse social Impacts	Mitigation Measures	Targeted Groups	Budget	Responsible Party
			<p>meet their needs (the time of day that works for them may be different than for men, or they may be more likely to need verbal vs. written communication, for example. it would also be important that the men are also informed of these deliberate actions to ensure that they became more accepting.</p> <p>(iv) Creating a training program for women that worked with them to become more comfortable speaking up in community meetings</p>			

Overall Project ESS Risks						
Key area of Concern:	Community Response	Potential Risks and Adverse social Impacts	Mitigation Measures	Targeted Groups	Budget	Responsible Party
			(v) Formation of community groups under the project will be done through community led nominations and elections. As part of the background work for the project team, to identify potential "elite households or individuals", to ensure that they are not the only people who are nominated.			
<p><b>Capacity to claim community rights</b></p> <p>Is there a risk that local communities affected by the project could be unaware of their rights and/or lack the capacity to claim them?</p>	Although we may have different levels of understanding, the capacity to understand our rights are there but our ability to claim them is where we lack capacity especially with regard to the project.	(i) Communities must have some capacity to claim their rights based on the impact of the injustice in question, although they don't know most of their rights and how to claim them and from whom. In most cases, they lack	<p>(i) Incorporate participatory and conflict resolution processes into project design to minimize this risk.</p> <p>(ii) The project needs to conduct a community training on land and resource tenure and rights to natural</p>	Communities At village and Ward level	USD 5, 000 >>The project has extensive consultation processes for the relevant activities (1.1.1 Boundary marking; 1.2.1 WRPA development). ESMF/PF and GRM should cover	PMU with the Knowledge specific expert

Overall Project ESS Risks						
Key area of Concern:	Community Response	Potential Risks and Adverse social Impacts	Mitigation Measures	Targeted Groups	Budget	Responsible Party
	According to the community, they are very much aware of their rights but they lack capacity to claim them. While this is a positive safeguard for the community, the risk lies in the capacity to claim their rights to project benefits, particularly arising from the potential implementation.	<p>capacity to claim their rights, they mainly rely on what they are told by officials, but sometimes it's not very clear to them.</p> <p>(ii) Designation of Community Forests and Water User Associations may resurrect old customary land disputes</p> <p>(iii) The potential for resource tenure conflicts depend on how the project selects the Water User Associations and the CFMGs</p>	<p>resources in the project site.</p> <p>(iii) There should be fair process in the selection criteria for beneficiaries from all project activities, with special attention for the selection criteria for the members of CFMGs and WUAs.</p>		awareness raising on rights. >> Likely no additional cost during implementation	
<b>COMACO Operations (3.3, 3.4)</b>	Although the project will improve climate resilient CA practices and community forestry, there is an assumption in the theory of change that this will lead to increased productivity or	CA actions supported and linked to markets should ensure that risks associated with COMACO markets are well described to communities and also need to ensure non-exploitation of	The available market for communities' facilities should not exploit farmers but should empower them by giving them the best value for their crops.	Communities/ Ministry of Agriculture	COMACO should undergo due diligence by WWF	PMU/ COMACO MoGEE

Overall Project ESS Risks						
Key area of Concern:	Community Response	Potential Risks and Adverse social Impacts	Mitigation Measures	Targeted Groups	Budget	Responsible Party
	higher market prices for products, which in turn will lead to better livelihoods and reduce the need for resource extraction. Also need to be careful to avoid negative impacts on the forest estate in open areas.	<p>communities through price fixation and impositions.</p> <p>(ii) Communities should be at liberty to sell their goods and services to any market to avoid monopoly of services.</p> <p>(iii)The project will promote and build the capacity of communities in forest management approaches to reduce the overexploitation of forests.</p>	<p>COMACO should go through due diligence checked by WWF before being contracted and this process should address some of the risks related to their contracting terms.</p> <p>The project needs to ensure that communities have the capacity to understand the terms of the contracts with COMACO, while COMACO's terms for sale of produce should be fair also.</p>			

Proposed project output of Key Concern:	Potential Risks and Adverse Impacts	Mitigation Measures	Targeted groups	Means of verification	Budget By When	Responsible Party
Output 1.1.1: Boundary demarcation of Mafinga Hills NFR (with beacons)	Output 1.1.1 The Land Boundary demarcation and Beacon Setting could cause traditional land boundary conflicts between village headman in Maliko and NFR	(i) Customary and statutory boundaries need to be clarified to the chiefs and headmen (b) the	(i)The Chiefs and Headmen/ headwomen on the project site.	<ul style="list-style-type: none"> <li>Community meeting with chiefs and headmen</li> <li>List of participants</li> <li>Minutes and reports</li> </ul>	<p>USD 8,000</p> <p>This Output already includes an awareness programme</p>	PMU with technical support from FD





<b>Proposed project output of Key Concern:</b>	<b>Potential Risks and Adverse Impacts</b>	<b>Mitigation Measures</b>	<b>Targeted groups</b>	<b>Means of verification</b>	<b>Budget</b> <i>By When</i>	<b>Responsible Party</b>
		<p>distorted by the restriction of access to NFR by the project</p> <p>(iv) See Process Framework in Chapter 8 for access restriction. Additionally, ensure human-rights based enforcement.</p>	(iv) FD and Community Members and Civic leaders	<ul style="list-style-type: none"> <li>• Planning and awareness meeting at village level</li> </ul>		
Output 1.1.2: Participatory management plan for Mafinga Hills NFR developed and endorsed	Output 1.1.2: Participatory management plan for Mafinga Hills NFR could leave out the voices of vulnerable community members in developing the NFR management plan	Participatory management plan meetings should engage and consult with vulnerable community members for input into management plan	Vulnerable members of the targeted communities	<ul style="list-style-type: none"> <li>• Number of Vulnerable community members engaged</li> <li>• List of participants</li> <li>• Community Engagement Report</li> </ul>	USD 1500 Will be included in Mgt Plan consultation process	PMU /WECSZ
Output 1.1.3: Assisted regeneration of degraded forest and grassland areas undertaken through community engagement	Output 1.1.3: assisted regeneration through community engagement could introduce invasive species and use pesticides in a way that could harm the environment or the people applying them.	The project and communities should set guidelines for avoiding the use of invasive species and ensuring the proper selection application of chemicals and pesticides in the area in compliance with WWF's Standard on Pest Management.	Community Members	Guidelines developed Community report	USD 3,000  This Output is inside NFR, therefore IAS and pesticides covered by Forestry Dept. regulations and the NFR management plan	PMU/COMAC O/ WECSZ

<b>Proposed project output of Key Concern:</b>	<b>Potential Risks and Adverse Impacts</b>	<b>Mitigation Measures</b>	<b>Targeted groups</b>	<b>Means of verification</b>	<b>Budget</b> <i>By When</i>	<b>Responsible Party</b>
Output 1.1.4: Training, capacity building and operational support for management of Mafinga Hills NFR and surrounding areas	Output 1.1.4: Improper training in the use of equipment and enforcement could result in negative impacts on community health and safety	(i) ensure proper training and support for use of equipment  (ii) ensure training includes human-rights based approaches to enforcement	Community members at village and Ward level	<ul style="list-style-type: none"> <li>• Training participants</li> <li>• Training manual developed</li> <li>• Training report</li> </ul>	USD 15,000  Training in safe equipment use will be provided; HR-based enforcement training input to be provided by M&ESL Officer as part of Hon / Ranger training.	PMU /Knowledge specific experts
Output 1.2.1: Proposal prepared through a participatory process leading to gazettement of the Luangwa headwaters as a Water Resource Protection Area (WRPA)	Output 1.2.1: Participatory process leading to gazettement of the Luangwa headwaters as a Water Resource Protection Area (WRPA) has community land and resource tenure rights and constitutes a risk of access restriction to local communities	See Process Framework in Chapter 8. There is need to develop participatory and conflict resolution processes into process framework to minimize this risk.	Community members at village and Ward level	<p>Planning and awareness of process framework meeting at village level</p> <p>Awareness of GRM to the communities</p>	Covered in safeguards consultation needs costs	Safeguards & Monitoring, Evaluation and Learning Officer
<b>Component 2: Community management of the Upper Luangwa Sub-catchment (Mafinga District)</b>						
Output 2.1.1. Community landscape management plans and conservation	Outcome 2.1.1: community landscape management plans and conservation agreements risk being politicized	There is need to build inclusivity of project affected communities during negotiations on	Community members FD Village headmen/women	<ul style="list-style-type: none"> <li>•Number of Vulnerable community members engaged</li> <li>•List of participants</li> </ul>	Participatory approach should cover safeguards	Safeguards & Monitoring, Evaluation and Learning Officer

<b>Proposed project output of Key Concern:</b>	<b>Potential Risks and Adverse Impacts</b>	<b>Mitigation Measures</b>	<b>Targeted groups</b>	<b>Means of verification</b>	<b>Budget</b> <i>By When</i>	<b>Responsible Party</b>
agreements negotiated with local farmers and monitored	without consultative process on land tenure rights	community landscape management plans to ensure they undergo consultations to avoid community land tenure conflicts.  See Process Framework in Chapter 8.		•Community agreement and verified Report	consultation needs costs	
Output 2.1.2. Key climate-resilient conservation agriculture actions by farmers around the Mafinga Hills NFR supported and linked to markets	Output 2.1.2: designation and management of community forests risk developing elite capture, inequitable benefits; risks related to protection of natural habitat, land degradation.	(i) The project should come up with elite capture avoidance strategy (see mitigation measures listed under Elite Capture Risk in overall project risks table above). Equitable benefits sharing mechanism related to the protection of natural habitat and land management.	COMACO/WECSZ, FD	Elite Capture Avoidance Strategy Equitable benefit sharing mechanism developed	USD 2, 400 Project equitable benefit sharing approach is included in design / can be elaborated at inception	PMU

Proposed project output of Key Concern:	Potential Risks and Adverse Impacts	Mitigation Measures	Targeted groups	Means of verification	Budget By When	Responsible Party
		(ii) CA actions should be analyzed to ensure no negative impact on natural habitat or land degradation.				
	<p>i) Communities do not understand the risks associated with COMACO markets</p> <p>ii) Communities should be at liberty to sell their goods and service to any market to avoid monopoly of services.</p> <p>iii) Incapability of communities to understand contractual clauses</p> <p>iv) Contracts could lead to exploitation of communities through price fixation and impositions</p>	<p>(iii) Ensure risks associated with COMACO markets are well described to communities CA actions and support needs to ensure trainings does not just benefit those with position of responsibilities in community, but also vulnerable groups.</p> <p>(iv) Ensure community contracts are not exploitative to the communities and should leave them with some level</p>	<p>COMACO WECSZ, Community groups at village and ward levels Ministry of Agriculture</p>	<p>CA Actions and Support</p>	<p>USD 4,000 &gt;&gt; Project approach will ensure vulnerable groups are proactively included in CA support through SEP; COMACO operations subject to due diligence screening; COMACO contracting terms to be disclosed and approved by project management</p>	<p>PMU</p>

Proposed project output of Key Concern:	Potential Risks and Adverse Impacts	Mitigation Measures	Targeted groups	Means of verification	Budget By When	Responsible Party
		<p>of choice on the available market</p> <p>(v) Community contracts must be assessed to review the main contractual clauses and their implications for affected communities</p> <p>(vi) Encourage contractual disclosure by the service provider</p>				
<p>Output 2.1.3 Community woodlots provided through natural regeneration areas to reduce forest loss from wood fuel gathering within Mafinga Hills NFR</p>	<p>Output 2.1.3 – woodlots might lead to degradation of land, pesticide use could lead to harm for environment and people, invasive species might be used in woodlots, might be elite capture in terms of benefits and communities managing nurseries.</p>	<p>Awareness on community Woodlots, need to ensure that it is created on already-degraded land, pesticides are selected and used based on WWF Standard on Pest Management, ensure no invasive species introduced, and create equitable benefit sharing plan to avoid elite capture of communities benefits and</p>	<p>Community Groups Forestry Department Village heads</p>	<p>Community Meetings and awareness meetings and Radio talk shows on community radio</p>	<p>USD 1,500 &gt;&gt; Project consultation / engagement processes will incorporate guidance on IAS and pesticide avoidance</p>	<p>PMU/ FD MoGEE</p>

<b>Proposed project output of Key Concern:</b>	<b>Potential Risks and Adverse Impacts</b>	<b>Mitigation Measures</b>	<b>Targeted groups</b>	<b>Means of verification</b>	<b>Budget</b> By When	<b>Responsible Party</b>
		managing of nurseries (see mitigation measures listed under Elite Capture Risk in overall project risks table above)				
Output 2.1.4 Participatory designation and management of community forest areas undertaken with communities outside Mafinga Hills NFR	Output 2.1.4 –Designation and management of community forests present risks of elite capture, inequitable benefits; risks related to protection of natural habitat, land degradation and should avoid negative impacts on the natural habitat by not targeting pristine forests.	Elite capture avoidance strategy (see mitigation measures listed under Elite Capture Risk in overall project risks table above), equitable benefits sharing strategy related to protection of natural habitat, communal land management in form of CFMG. CF should target only degraded forest areas	Community Groups Civic Leaders Village Heads	<ul style="list-style-type: none"> <li>• elite capture avoidance strategy</li> <li>• equitable benefits sharing strategy</li> </ul>	USD 1, 500 Project equitable benefit sharing approach is included in design / can be elaborated at inception	PMU/ FD/ MoGEE
<b>Component 3: Knowledge management and Monitoring and Evaluation (M&amp;E)</b>						
Output 3.1.1: Cross-sectoral communication strategy developed and implemented to support sustainable catchment	Output 3.1.1: (i) The strategy may be focused more on the project outcomes than community needs and interests	There should be multi-sectoral coordination meetings at district level that will draw representation of local communities.	Local communities District stakeholders Civil society Civic leadership Local authority	Number of coordination meeting held List of participants	USD 1,200 >> District level meeting can be absorbed in existing costs for sharing lessons with	PMU COMACO WECSZ

<b>Proposed project output of Key Concern:</b>	<b>Potential Risks and Adverse Impacts</b>	<b>Mitigation Measures</b>	<b>Targeted groups</b>	<b>Means of verification</b>	<b>Budget</b> <i>By When</i>	<b>Responsible Party</b>
management in headwater areas					other areas (BL120 - \$10,000) >>	
Output 3.1.2: Knowledge products designed and distributed to relevant stakeholders	Output 3.1.2: The knowledge products could be blind to community social needs which the project brings to the fore	Project should assess community knowledge needs in line with project implementation guidelines	Community groups	Community needs assessment for knowledge products	USD 1,500 Could be covered through existing BL97 \$6,000 for community meetings to document TK and lessons	PMU



## 7. PROCEDURES FOR THE IDENTIFICATION AND MANAGEMENT OF ENVIRONMENTAL AND SOCIAL IMPACTS

### **Screening**

Screening process is usually the first level assessments of project activities. If the screening reveals adverse environmental or social impacts that may arise from the planned activity, then scoping exercise of environmental and social safeguards needs to be conducted. This is a practical way of assessing the type of risks or its potential impact that the project activities are likely to subject environment and communities to. Scoping should be carried out by the environmental and social specialist in order to be sound and reliable.

### **Assessment of possible risks**

If the screening identifies potential environmental or social risks that would arise from project activities, an assessment process based on participatory consultations with affected peoples will be carried out. The assessment will generate the necessary environmental and/or social baseline information and assess potential impacts. If it is determined the impacts require mitigation, then an ESMP will be prepared with suitable mitigation measures.

### **Development of an Environmental and Social Safeguards Mitigation Plan (ESMP)**

The ESMP should be prepared before the initiation of the project activity and closely follow the guidance provided in the ESMF. The ESMP should describe adverse environmental and social impacts that are expected to occur as a result of the specific project activities. It outlines concrete measures that should be undertaken to avoid or mitigate environmental and social impacts, and specify the implementation arrangements for the management of mitigation measures (including institutional structures, roles, communication, consultations and reporting procedures).

### **Template for an ESMP**

**A concise introduction:** explaining the context and objective of the ESMP, the connect of the proposed activity to the project, and the findings of the screening process. **Project description:** Objective and description of activities, nature and scope of the project (location with map, construction and/or operation processes, equipment to be used, site facilities and workers and their camps; bill of quantities if civic works involved, activity schedule). **Baseline environmental and social data:** key environmental information or measurements such as topography, land use and water uses, soil type, flow of water, and water quality/pollution; and data on socioeconomic conditions of the project sites should also be included. **Expected impacts and mitigation measures:** description of specific environmental and social impacts of the activity and corresponding mitigation measures. This section should integrate measures that are prescribed in the log frame format below (see PRODOC Section on Environmental and Social Safeguards Mitigation Plan for details). **ESMP implementation arrangements:** Responsibility for design, bidding and contracts where relevant, monitoring, reporting, recording and auditing. **Capacity Need and Budget:** Capacity needed for the implementation of the ESMP and cost estimated for implementation of the ESMP. **Consultation and Disclosure Mechanisms:** Timelines and format of disclosure. **Monitoring:** Environmental and social compliance monitoring with responsibilities. **Grievance Mechanism:** provide information about grievance mechanism, how can access it,

and the grievance redress process. **A site-specific community and stakeholder engagement plan:** in order to ensure that local communities and other relevant stakeholders are fully involved in the implementation of the ESMP, a stakeholder engagement plan should be included in the ESMP. Specific guidelines on community engagement are provided in part.

## 8. PROCESS FRAMEWORK IN RELATION TO ACCESS RESTRICTION

### Overview

Some of the management plans (Output 1.1.2, Output 2.1.1), gazettelement of a WRPA (Outcome 1.2), or other activities may include **access to livelihoods** restrictions (access to and usage of grazing areas, as well as access to and usage of irrigation water sources). **Mitigation measures** would include the following:

- Livelihoods-related support during project implementation will be provided to the households (HH) of all communities impacted by project-induced restrictions of access to natural and community resources within the targeted areas. The Project Manager with technical inputs from the Safeguards & Monitoring, Evaluation and Learning Officer at PMU will undertake screening of all planned activities for likely access restrictions to local communities. If the screening confirms and identifies HHs affected due to access restriction to natural resources, a social assessment (SA) process based on participatory consultations with affected peoples will be carried out.
- Based on the findings of the screening and social assessment, action plans usually known as Livelihood Restoration Plans (LRP) will be prepared after holding further meaningful consultations with affected peoples and stakeholders which will provide tailored livelihood support and benefit sharing for affected persons, groups and communities.

### Procedures for the Process Framework

The development of management plans and the gazettelement of a WRPA as part of this project may result in restrictions of access to livelihoods and natural resources for local communities. Any change of land use or new demarcation of boundaries should be based on free, prior, and informed consultations of the affected communities and relevant authorities, which should be obtained prior to finalizing any border change.

If the demarcation of land boundaries, rehabilitation and restoration activities, or shifting grazing areas negatively impact sources of economic income or other types of livelihoods of affected communities, full and timely compensation shall be provided to all affected individuals, irrespective of their formal land title. All affected communities and households around the project-supported areas will be provided with opportunities to restore their livelihoods to at least pre-project levels.

Livelihoods-related support during project implementation will be provided to the households (HH) of all communities impacted by project-induced restrictions of access to natural and community resources within the targeted areas. This process will be organized in the following manner:

- *Screening*

The Project Manager with technical inputs from the Safeguards & Monitoring, Evaluation and Learning Officer at PMU will undertake screening of all planned activities for likely access restrictions to local communities. This will include both communities that reside in project-affected areas with formal title, and those that may lack land title.

- *Social assessment*

If the screening confirms and identifies HHs affected due to access restriction to natural resources, a social assessment (SA) process based on participatory consultations with affected peoples will be carried out. The SA will generate the necessary baseline information on demographics, social, cultural, and economic characteristics of affected communities, as well as the land and territories that they have traditionally owned or customarily used or occupied, and the natural resources on which they depend. The SA will assess potential impacts and the extent of restriction of access to resources along with suitable mitigation and enhancement measures including options for alternative access to similar resources.

- *Livelihood Restoration Plans*

Based on the findings of the screening and social assessment, action plans usually known as Livelihood Restoration Plans (LRP) will be prepared after holding further meaningful consultations with affected peoples and stakeholders which will provide tailored livelihood support and benefit sharing for affected persons, groups and communities.

The LRPs will be site-specific and include the following issues: (1) identifying and ranking of site-specific impacts; (2) setting out criteria and eligibility for livelihood assistance; (3) outlining the rights of persons who have been either customarily or legally/illegally using forest, water, or land resources for subsistence to be respected; (4) describing and identifying available mitigation measures alternatives, taking into account the provisions of applicable local legislation, and the available measures for mitigation promoted via project activities and considering any additional sound alternatives, if proposed by the affected persons; (5) outlining specific procedures on how compensation can be obtained.

- *Mitigation measures as part of the LRPs*

Participatory and inclusive consultations should be carried out with affected communities, individuals, and stakeholders to agree on the allocation of alternative livelihood. Eligibility criteria should be established according to guidelines provided in the section on community engagement for the preparation of LRPs below.

Alternative livelihood schemes should be discussed, agreed upon and provided for affected persons/ groups. The livelihood options to be built on and be based upon the traditional skills, knowledge, practices and the culture/world view of the affected peoples/groups and persons.

Affected persons should be provided project-related livelihood support and other opportunities as part of the planned project activities. These may include activities implemented as part of the following outputs:

- *Output 2.1.2: Key conservation agriculture actions by farmers around the Mafinga Hills NFR supported and linked to markets*
- *Output 2.1.3: Community woodlots and natural regeneration areas established to reduce forest loss from wood fuel gathering within Mafinga Hills NFR*
- *Output 2.1.4: Participatory designation and management of community forest areas undertaken with communities outside Mafinga Hills NFR*

An accessible and efficient grievance redress mechanism should be established and made functional (see Chapter 10 of this ESMF/PF).

Special attention should be made to tailoring these mitigation measures to the needs of vulnerable people and communities. While some of them may be interested in the mitigation measures outlined above, others may necessitate an alternative approach (e.g., allocation of alternative grazing areas). Any proposed measures should be closely coordinated with PAPs to ensure that they fully reflect their needs and priorities.

- *Compensation*

In case that compensation is awarded, it shall be calculated based on the replacement value of these livelihoods (economic market value plus any replacement costs) by an Independent Evaluator supervised by the Project Manager and Safeguards & Monitoring, Evaluation and Learning Officer. In cases where compensation will consist of the allocation of alternative resources (e.g., alternative grazing areas), measures will include identification of these resources with the active involvement of the affected persons/communities and assistance to access these resources. Detailed procedures on how compensation should be calculated and awarded should be provided in each site-specific LRP based on local conditions.

### **Community Engagement for the Preparation of LRPs**

- *When should local communities be engaged?*

Project affected communities should be engaged in advance of the implementation of each activity that may affect their interests, entitlements, and livelihoods. Such activities should be identified by the Project Manager and the Safeguards & Monitoring, Evaluation and Learning Officer by going through the environmental and social safeguards screening process. If the screening reveals any adverse environmental or social impacts that may result from a planned activity, a community consultation should be organized in advance of the implementation of this activity, in order to mitigate its adverse impacts. Activities that result in restriction or loss of livelihood should trigger the development of site-specific livelihood restoration plans (as indicated in the section above).

- *Who should be engaged? Criteria for Eligibility of Project Affected Persons & Livelihood Restoration*

Community members that should be engaged in consultations are those persons who, as a direct consequence of an activity or subproject would, without their informed consent or power of choice either: (a) lose their assets or access to assets or access to community and natural resources, or (b) lose a source of income or means of livelihood, whether or not they physically relocate to another place.

For activities that may result in restrictions or loss of access to livelihood resources, a participatory process will be followed to identify people, groups, or households, who should participate in the livelihood restoration process. All of the proposed livelihood restoration activities, interventions and initiatives within the LRP will be developed in consultation with the affected communities. Implementation of each of these will also be carried out with full transparency and disclosure. Further details on the development of LRPs are provided in the section above.

- *Vulnerable groups*

Vulnerable and marginalized groups should be actively engaged in project-related consultations and in the development of LRPs, since their role in forest and habitat management, livelihood interventions, project supported incentive and benefit sharing make them vital to the process. These groups include women (especially widows and female-headed households), youth, disabled individuals, elderly (especially single-headed households).

- *How should communities be engaged?*

For the community engagement process to be as inclusive as possible, it is important to use as many avenues as possible to inform all stakeholders through community meetings, community messengers, advertisements, national radio and television etc. Special measures should be undertaken to ensure the inclusive engagement of all community members, and in particular vulnerable groups:

- *Easy notification:* communities will be notified and engaged through both traditional (local) and modern methods in light of the quality of phone networks, weather and road accessibility to ensure adequate outreach to all groups (including people with disability and those who can't read).

Methods will include publication of information of various developments and on planned meetings on village notice boards, notification of meetings through phone, letters, public address using speakers and microphones, and dispatch of leaflets/letters/information using community messengers. Background information for meetings will be provided in advance to the village or other relevant level.

To proactively reach out to specific target groups in the community (e.g. women, youth, etc.), the project will identify and engage local opinion leaders in those groups, and solicit their help to spread the message to other members.

- *Convenient location and timing:* Local community leaders should help in deciding where to place other information so that target groups will be likely to encounter it. They should also advise on the most suitable timing to convene consultation meetings to ensure that as many community members as possible may attend. This may require enhanced awareness to the availability of women to attend (and set aside household chores), availability of farmers to attend, etc. The project will ensure that there is enough time (such as minimum one-week notice), flexibility (e.g. due to disability, some may come from far) to ensure there is participation of all intended members of communities. This will avoid the risks of women and other relevant groups being excluded to take part in public gatherings as a result of their disability, gender orientation, economic activity, religion or tribalism.
- *Simple communication:* Communication should be simplified and adapted to ensure that it fits the local context and helps build confidence (especially in the context of engaging women and youth). In all meetings, the local language will be used and where necessary, translation will be used from English to local languages using members of the communities.
- *Appropriate engagement format:* A combination of methods will be used when consulting and engaging local communities to enhance inclusiveness and active participation of all community groups. This will primarily include village meetings (open meetings), focus group discussions using various criteria depending on situation (per economic activity, age group, gender, etc.); and key informant discussions with emphasis on specific topics.
- *Local facilitation:* It is expected that the PMU will convene most of the meetings, and the discussions should be led by community members and officials from the local government. These meetings should be held in collaboration with local community-based organizations, private sector representatives, and community members. The collaboration is important to lend credibility to the intervention as it may be identified as a community effort rather than an imposition by the government or any particular organization.
- *Documentation:* A register of complaints will be kept, updated regularly and feedback systems developed to ensure that women and other relevant groups (elderly, young other marginalized groups) are fully included in consultations, benefit from the project and informed on the progress on the project.

- *Closing the feedback loop*

Once the community engagement process has started, it has to be maintained. Stakeholders in the community must be kept informed, and support has to be provided when needed, conflicts have to be

resolved, methods have to be devised to keep the process reasonably efficient, goals and deadlines have to be set. It is expected that this logical proceeding of activities and the consultation and involvement of local communities in the project, will minimize any potential conflicts and grievances.

The Project Manager, with support from the Safeguards & Monitoring, Evaluation and Learning Officer, will ensure that affected persons are informed about the outcome of the decision-making process and will confirm how their views were incorporated into the design of project activities, if at all. Specific procedures on how compensation for access restrictions can be obtained should be provided in LRPs.

## 9. MONITORING

The compliance of Sustainable Luangwa project activities with the ESMF will be thoroughly monitored by various entities at different stages of design, preparations and implementation.

**Monitoring at the project outcome and output level.** The overall responsibility for implementing the ESMF and for monitoring compliance with the project's environmental safeguard activities lies with the PMU. The Safeguards & Monitoring, Evaluation and Learning Officer procured by the PMU shall oversee the implementing activities and ensure their compliance with the ESMF.

**Monitoring at the level of field activities.** Both the Project Manager and the Safeguards & Monitoring, Evaluation and Learning Officer, shall closely monitor all field activities and ensure, they fully comply with the ESMF. The Safeguards & Monitoring, Evaluation and Learning Officer also fully responsible for the safeguard compliance of all external contractors, sub-grantees and service providers employed as part of the project with the safeguards requirements outlined in the ESMF/PF.

**Monitoring at the GEF Implementing agency level.** The MoGEE as the executing agency, WWF as the project's implementing agencies, and the chair of the project steering committee, are responsible to oversee compliance with the ESMF/PF.

## 10. GRIEVANCE REDRESS

A grievance is a concern or complaint raised by an individual or group negatively affected by project activities. A Grievance is not: (a) A question or suggestion for the project; or (b) An appeal or request for assistance.

Both concerns and complaints can result from either real or perceived impacts of the project's operations, and may be filed in the same manner and handled with the same procedure outlined in the GRM. Therefore, an effective and independent Grievance Redress Mechanism that collects and responds to stakeholders' inquiries, suggestions, concerns, and complaints is necessary to the project. The Sustainable Luangwa Project may have direct and indirect effect on a large number of communities and stakeholders living within or outside the project implementation areas.

### The Objectives of GRM

The Objectives of the grievance mechanism are:

1. To provide stakeholders with a clear process for providing comment and raising grievances;
2. To allow stakeholders the opportunity to raise comments or concerns anonymously through accessible channels;

3. To structure and manage the handling of comments, responses and grievances, and allow monitoring of effectiveness of the mechanism; and
4. To ensure that comments, responses and grievances are handled in a fair and transparent manner.

The Project Management Unit will establish specific roles and responsibilities related to the process below at the project inception workshop for resolving any and all grievances related to the project, which will require approval from the NSC. All grievances will be reviewed and responded to in writing within 7 working days of receipt.

### **Project Level Grievance Resolution Mechanism**

The GRM shall constitute an integral part of Sustainable Luangwa and assist the PMU in identifying and addressing the needs of local communities. Both complaints and responses shall be recorded in the Grievance Register for monitoring. If the claimant is not satisfied with the response, the grievance may be appealed in writing to the focal point at MWDSEP or to the WWF US GEF Agency.

The GRM should be constituted as a permanent and accessible institutional arrangement for addressing any grievances arising from the implementation of project activities. It is in the interest of the Sustainable Luangwa Project to ensure that all grievances or conflicts that are related to the Sustainable Luangwa project activities are appropriately resolved at the lowest level possible, without escalation to higher authorities or the initiation of court procedures. Project Affected Communities will therefore be encouraged to approach the Project's GRM for dispute settlement.

### **GRM Principles and Types of Grievances**

This will include seven steps described below and demonstrate a typical grievance redress mechanism. The GRM shall operate based on the following principles:

1. Fairness: Grievances are assessed impartially, and handled transparently.
2. Objective and independence: The GRM operates independently of all interested parties in order to guarantee fair, objective, and impartial treatment to each case.
3. Simplicity and accessibility: Procedures to file grievances and seek action are simple enough that project beneficiaries can easily understand them.
4. Responsiveness and efficiency: The GRM is designed to be responsive to the needs of all complainants. Accordingly, officials handling grievances must be trained to take effective action upon, and respond quickly to, grievances and suggestions.
5. Speed and proportionality: All grievances, simple or complex, are addressed and resolved as quickly as possible. The action on the grievances or suggestion is swift, decisive, and constructive.
6. Participation and inclusiveness: A wide range of affected people – particularly communities and vulnerable groups – are encouraged to bring grievances and comments to the attention of the project implementers. Special attention is given to ensure that poor people and marginalized groups, including those with special needs, are able to access the GRM.
7. Accountability and closing the feedback loop: All grievances are recorded and monitored, and no grievance remains unresolved. Complainants are always notified and get explanations regarding the results of their complaint. An appeal option shall always be available.

Complaints may include, but not be limited to, the following issues:

1. Allegations of fraud, malpractices or corruption by staff or other stakeholders as part of any project or activity financed or implemented by Sustainable Luangwa;
2. Environmental and/or social damage/harm caused by projects financed or implemented (including those in progress) by Sustainable Luangwa;
3. Complaints and grievances by permanent or temporary workers engaged in project activities.

Complaints could relate to resource efficiency; negative impacts on public health, environment or culture; destruction of natural habitats; disproportionate impact on marginalized and vulnerable groups; discrimination or harassment; violation of applicable laws and regulations; destruction of physical and cultural heritage; or any other issues which adversely impact communities or individuals in project areas. The grievance redress mechanism will be implemented in a culturally sensitive manner and facilitate access for vulnerable populations.

### **GRM Procedures**

Sustainable Luangwa will be administered by the PMU. The Safeguards & Monitoring, Evaluation and Learning Officer will be in charge of the operation of the GRM at the PMU and will be responsible for collecting and processing grievances that relate to activities in the landscape. The GRM will operate according to the following procedures.

1. Submitting complaints: Project Affected People or interested stakeholders can submit grievances or complaints directly to the PMU through a variety of communication channels, such as phone, regular mail, text messaging/SMS, or in-person, or by visiting the local PMU offices. It is important to separate channels for complaint submissions in order to ensure that project affected people have sufficient opportunities to lodge their complaints to impartial and neutral authorities.
2. Processing complaints: All grievances submitted to the PMU shall be registered and considered. A tracking registration number should be provided to all complainants. To facilitate investigation, complaints will be categorized into four types: (a) complaints relating to non-performance of Sustainable Luangwa obligations and safeguards-related complaints; (b) complaints referring to violation of law and/or corruption while implementing project activities; (c) complaints against authorities, officials or community members involved in the Sustainable Luangwa project management; and (d) any complaints/issues not falling in the above categories.
3. Acknowledging the receipt of complaints: Once a grievance is submitted, the Safeguards & Monitoring, Evaluation and Learning Officer at the PMU shall acknowledge its receipt, brief the complainant on the grievance resolution process, provide the contact details of the person in charge of handling the grievance, and provide a registration number that would enable the complainant to track the status of the complaint.
4. Investigating complaints: The Safeguards & Monitoring, Evaluation and Learning Officer at the PMU will gather relevant information, conduct field visits as necessary, and communicate with all relevant stakeholders as part of the complaint investigation process. For instance, complaints on land issues and local issues would be directed for investigation at the level of Village Headman, except in cases where they cannot be impartial, such as if they or any relatives are named in the grievance. The PMU dealing with the investigation shall ensure that the investigators are neutral and do not have any stake in the outcome of the investigation. A written response to all grievance will be provided to the complainant within 10 working days. If further investigation is required, the complainant will be informed accordingly and a final response will be provided after an additional period of 10 working



days. Grievance that cannot be resolved by grievance receiving authorities/office at their level should be referred to a higher level for verification and further investigation.

5. If the grievance is in any way related to the behavior or actions of the Safeguards & Monitoring, Evaluation and Learning Officer, it may be submitted directly to the Project Manager, another member of the PMU, or it may be submitted directly to the WWF GEF Agency.
6. Appeal: In the event that the parties are unsatisfied with the response provided by the GRM, he/she/they will be able to submit an appeal to the MWDSEP within 10 days from the date of submission.
7. Monitoring and evaluation: The Safeguards & Monitoring, Evaluation and Learning Officer will prepare semi-annual reports with full information on the grievances received and their investigation status which the Project Manager shall submit to the WWF GEF Agency and the NSC as part of the regular project progress reporting.

**Information about channels available for grievance redress shall be widely communicated in all project affected communities and with all relevant stakeholders.** The contact details (name, phone number, mail and email address, etc.) of the Safeguards & Monitoring, Evaluation and Learning Officer in the Sustainable Luangwa PMU should be disseminated as part of all public hearings and consultations, in the local media, in all public areas in affected communities, or project activity area sites.

The GRM seeks to complement, rather than substitute, the judicial system and other dispute resolution mechanisms. All complainants may therefore file their grievance in local courts or approach mediators or arbitrators, in accordance with the legislation of Zambia. In addition to the project specific GRM, a complainant can submit a grievance to the WWF GEF Agency.

#### **WWF GEF Agency Grievance Mechanism**

A grievance can also be filed with the Project Complaints Officer (PCO), a WWF US staff member fully independent from the Project Team, who is responsible for the WWF Accountability and Grievance Mechanism and who can be reached at:

Email: [SafeguardsComplaints@wwfus.org](mailto:SafeguardsComplaints@wwfus.org)

Mailing address: Project Complaints Officer Safeguards Complaints, World Wildlife Fund 1250 24th Street NW Washington, DC 20037

The PCO will respond within 10 business days of receipt, and claims will be filed and included in project monitoring.

Stakeholders may also submit a complaint online through an independent third – party platform at <https://report.whistleb.com/sw/wwf>.




#### **Grievance Redress and Record Keeping**

In order to ensure that each grievance is traceable and addressed in a quickest possible time, the Project Management Unit shall establish a grievance uptake record-keeping procedure, with the following items recorded:

- Individual reference number
- Name of the person submitting the complaint, question, or other feedback, address and/or contact information (unless the complaint has been submitted anonymously)

- Details of the complaint or concern
- Date that the complaint or concern was raised
- Name of person assigned to deal with the complaint (acknowledge to the complainant, investigate, propose resolutions, etc.)
- Details of proposed resolution, including person(s) who will be responsible for authorizing and implementing any corrective actions that are part of the proposed resolution
- Date when proposed resolution was communicated to the complainant (unless anonymous)
- Date when the complainant acknowledged, in writing if possible, being informed of the proposed resolution
- Details of whether the complainant was satisfied with the resolution, and whether the complaint can be closed out

*Table 16: Suggested Grievance Redress and reporting Mechanism for sustainable Luangwa project*

	<u>Roles and Responsibilities</u>			
	<u>Focal Point Unit/Organizations</u>	<u>Focal Persons</u>	<u>When a complaint is submitted</u>	
			<u>Recording complaints</u>	
<b><u>National</u></b>	<ul style="list-style-type: none"> <li>○ National Project Implementation Unit (PIU)</li> </ul>	<ul style="list-style-type: none"> <li>○ Minister</li> <li>○ National Focal Point</li> </ul>	<p>The National Focal Point Officer will try to address it.</p> <ul style="list-style-type: none"> <li>• When resolved, the Officer who raised the issue will be informed.</li> <li>• If not resolved, the complaint will be reported to Minister.</li> </ul>	<ol style="list-style-type: none"> <li>1. Record the complaint submitted in the national-level grievance record.</li> <li>2. Review monthly monitoring submitted by the provincial-level, and enter all complaints with the status will be recorded in the national-level grievance database.</li> </ol>
				
<b><u>Provincial</u></b>	<ul style="list-style-type: none"> <li>○ Provincial Planning Sub-Committee</li> </ul>	<ul style="list-style-type: none"> <li>○ Assistant Director Planning (Provincial Planner)</li> </ul>	<p>The planner and the project manager will discuss the issue and try to address it at the provincial level.</p> <ul style="list-style-type: none"> <li>• When resolved, the person who raised the issue will be informed.</li> <li>• If not resolved, the complaint will be reported to the National Focal Point person.</li> </ul>	<ol style="list-style-type: none"> <li>1. Record the complaint submitted in the monitoring form.</li> <li>2. Submit the project's monthly monitoring form including a record on complaints to the national-level Focal Point Person.</li> </ol>
				
<b><u>District</u></b>	<ul style="list-style-type: none"> <li>○ District Planning Sub-Committee</li> </ul>	<ul style="list-style-type: none"> <li>○ District Project Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>• When resolved, the person who raised the issue will be informed.</li> <li>• If not resolved, the complaint will be reported to the Provincial Planner</li> </ul>	<ol style="list-style-type: none"> <li>1. Record the complaint submitted in a monitoring form.</li> <li>2. Submit the project's monthly monitoring form including a record on complaints to the Provincial PIU</li> </ol>
				
<b><u>Ward</u></b>	<ul style="list-style-type: none"> <li>○ Ward Development Committee</li> </ul>	<ul style="list-style-type: none"> <li>○ Ward Development Committee Chairperson</li> </ul>	<ul style="list-style-type: none"> <li>• When resolved, the person who raised the issue will be informed.</li> <li>• If not resolved, the complaint will be reported to the District Planner.</li> </ul>	<ol style="list-style-type: none"> <li>1. Record the complaint submitted in a simple form.</li> <li>2. Submit the record of complaints to the District Planning Sub-Committee</li> </ol>



**Zone/  
Community**

<ul style="list-style-type: none"><li>○ Traditional Structure</li><li>○ Facilitator</li></ul>	<ul style="list-style-type: none"><li>○ Project Focal Point</li><li>○ Village head/Area Induna</li><li>○ Facilitator</li></ul>	<p>The focal persons at the community level will discuss and try to address it within the community</p> <ul style="list-style-type: none"><li>• When resolved, the person who raised the issue will be informed.</li><li>• If not resolved, the complaint will be reported to the Ward Development Committee Chairperson.</li></ul>	<ol style="list-style-type: none"><li>1. Record the complaint submitted in a simple form.</li><li>2. Submit the record of complaints to the Ward Development Chair Committee.</li></ol>
---	--	---	---

## 11. DISCLOSURE

All affected communities and relevant stakeholders shall be informed about the ESMF requirements and commitments. The ESMF in English, along with the SEP, on the websites of the MoGEE, WWF Zambia, and the WWF GEF Agency. The executive summary, Annexes of identified risks and GRM of the ESMF will be translated into local language and made available in hard copy in appropriate public locations in Mafinga District Commissioner's Office. The ESMF and other safeguards documents are required to be disclosed for a period of 30 days prior to the start of the project, and should be made available for the duration of the project in the PMU office.

The Safeguards & Monitoring, Evaluation and Learning Officer will be responsible for raising community awareness regarding the requirements of the ESMF, and will also ensure that all external consultants, sub-grantees and service providers are fully familiar and comply with the ESMF and other safeguards documents.

The PMU must also disclose to all affected parties any action plans prepared during project implementation, including ESMPs and LRPs.

Table 17: Reporting framework for ESMF related documents

<b>Documents to be disclosed/reported</b>	<b>Frequency</b>	<b>Where (disclosed)/To whom (reporting)</b>
Environmental and Social Management Framework	Once in the entire project cycle. Must remain on the website and other public locations throughout the period	On the website of MoGEE and WWF. Copies at the PMU Office (disclosure)
Environmental and Social Management plans (ESMP)	Must remain on the website and other disclosure locations throughout the project period	Safeguards & Monitoring, Evaluation and Learning Officer (Office disclosure)
Grievance redress mechanism	Continuously throughout project implementation (disclosure) Biannually, throughout the project cycle (reporting)	Safeguards & Monitoring, Evaluation and Learning Officer and at the PMU Office (PMU disclosure) PMU and WWF GEF Agency (reporting)

## 12. BUDGET

The ESMF implementation costs, including all cost related to compensation to project affected people, will be fully covered from the Sustainable Luangwa Project budget. It will be the responsibility of the PSC and PMU to ensure that sufficient budget is available for all activity-specific mitigation measures that may be required in compliance with the EMSF.

Budget will be earmarked for Safeguards & Monitoring, Evaluation and Learning Officer to work with the PMU and entire duration of the project.

Budget for travel costs and workshops and meetings for safeguards monitoring will be included in the overall monitoring and evaluation budget.

## ANNEX 1: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION

### MECHANISM FOR WATER POLICY 2010

The Ministry responsible for water is the lead institution for the sector and is mandated with the following responsibilities;

- i. Promulgation, in consultation with other stakeholders, appropriate water sector policies that will facilitate the proper management and development of the resource in accordance with the guiding principles under this policy
- ii. Implementation of the National Water Policy
- iii. Coordination of all policy implementation functions of the sector and cross-sector nature
- iv. Develop, in collaboration with other stakeholders, National Water Resources Strategy and Plan
- v. Monitor and evaluate the implementation of the strategies specified by the other sectors relating to water resources management and development
- vi. Coordinate the Water Sector Advisory Group; and
- vii. Monitor and coordinate the cross-sector issues and ensure that these are being addressed by the respective institutions.

The key stakeholders identified in the Water Policy, 2010, are hereby categorized and arranged under different water uses specified in the water policy. Their relevance to the institutional arrangement for the Sustainable Luangwa Project in Mafinga is also indicated as follows;

Water use category	Relevant stakeholders	Relevant to the Project
Water for Food and Agriculture	<ol style="list-style-type: none"> <li>i. Small Scale Farmers' Association</li> <li>ii. Zambia National Farmers' Union (ZNFU)</li> <li>iii. Ministry of Agriculture</li> <li>iv. National Association of Small Scale and Peasant Farmers</li> <li>v. Ministry of Community Development and Social Welfare</li> <li>vi. Research Institutions</li> <li>vii. Ministry of Lands and Natural Resources</li> <li>viii. Local communities</li> <li>ix. Civil Society Organizations (CSOs)</li> <li>x. Ministry of Gender</li> </ol>	✓
Water for Fisheries	<ol style="list-style-type: none"> <li>xi. Ministry of Fisheries and Livestock</li> <li>xii. Zambia Environmental Management Agency (ZEMA)</li> <li>xiii. Research Institutions</li> <li>xiv. Local communities</li> <li>xv. Zambezi River Authority (ZRA)</li> <li>xvi. Ministry of Gender</li> <li>xvii. Ministry of Foreign Affairs</li> </ol>	✓
Water for Tourism	<ol style="list-style-type: none"> <li>xviii. Ministry of Tourism and Arts</li> <li>xix. Tourism Operators</li> <li>xx. National Heritage Conservation Commission (NHCC)</li> </ol>	

	<ul style="list-style-type: none"> <li>xxi. Department of National Parks and Wildlife (DNPW)</li> <li>xxii. Local communities</li> <li>xxiii. CSOs</li> <li>xxiv. ZRA</li> </ul>	
Water Supply and Sanitation	<ul style="list-style-type: none"> <li>xxv. National Water Supply and Sanitation Council (NWASCO)</li> <li>xxvi. Commercial Water Utilities</li> <li>xxvii. ZEMA</li> <li>xxviii. Institutions dealing with underground water</li> <li>xxix. Research Institutions</li> <li>xxx. Water Drillers</li> <li>xxxi. Ministry of Health</li> <li>xxxii. Ministry of Local Government and Housing</li> <li>xxxiii. Local communities</li> <li>xxxiv. CSOs</li> <li>xxxv. Ministry of Gender</li> </ul>	
Water for Wildlife	<ul style="list-style-type: none"> <li>xxvi. Ministry of Tourism and Arts</li> <li>xxvii. DNPW</li> <li>xxviii. ZEMA</li> <li>xxix. Local communities</li> <li>xl. CSOs</li> </ul>	
Water for Mining	<ul style="list-style-type: none"> <li>xli. Ministry of Mines</li> <li>xlii. Chamber of Mines</li> <li>xliiii. ZEMA</li> <li>xliv. Ministry of Justice</li> <li>xliv. Local communities</li> <li>xlvi. CSOs</li> </ul>	
Water for Industry	<ul style="list-style-type: none"> <li>xlvii. Zambia Chamber of Commerce and Industry</li> <li>xlviii. Economics Association of Zambia</li> <li>xliv. ZNFU</li> <li>1. ZEMA</li> <li>li. Ministry of Trade, Commerce and Industry</li> <li>lii. Ministry of Justice</li> <li>liii. Ministry of Local Government and Housing</li> <li>liv. Commercial Water Utilities</li> </ul>	
Water for Environment	<ul style="list-style-type: none"> <li>lv. ZEMA</li> <li>lvi. Research Institutions</li> <li>lvii. Ministry of Lands and Natural Resources</li> <li>lviii. Ministry of Community Development and Social Welfare</li> <li>lix. Institutions dealing with underground water</li> <li>lx. Water Drillers</li> <li>lxi. Ministry of Local Government and Housing</li> <li>lxii. Local communities</li> <li>lxiii. CSOs</li> <li>lxiv. Commercial Water Utilities</li> <li>lxv. Ministry of Gender</li> </ul>	✓
Water for Energy	<ul style="list-style-type: none"> <li>lxvi. Institutions in Hydropower generation</li> <li>lxvii. Zambia Chamber of Commerce and Industry</li> <li>lxviii. ZEMA</li> <li>lxix. Ministry of Justice</li> </ul>	✓

	lxx.	Ministry of Foreign Affairs	
Water and Land	lxxi.	Ministry of Lands and Natural Resources	✓
	lxxii.	ZEMA	
	xxiii.	Ministry of Community Development and Social Welfare	
	xxiv.	Ministry of Justice	
	lxxv.	Office of the Surveyor General	
	xxvi.	Ministry of Local Government and Housing	
	xxvii.	Ministry of Transport and Communication	
	xxviii.	Ministry of Agriculture	
	xxix.	Local communities	
	lxxx.	CSOs	
	xxx.	Ministry of Gender	
Water for National Heritage	xxxii.	NHCC	
	xxiii.	Ministry of Tourism and Arts	
	xxiv.	Ministry of Local Government and Housing	
	xxxv.	ZEMA	
	xxvi.	Local Communities	
Water for Transport	xxvii.	Ministry of Transport and Communications	
	xviii.	ZEMA	
	xxix.	Ministry of Fisheries and Livestock	
	xc.	Ministry of Tourism and Arts	
	xc.	ZRA	
	xcii.	Ministry of Foreign Affairs	

## ANNEX 2: ESS QUESTIONNAIRE

### Definition of Environmental Social Safeguards.

Safeguards are measures to protect and avoid risks (Do no harm) while promoting benefits (Do good)

### Some Definitions: Customary law

It is “a body of norms generated and enforced by a traditional, sub-state polity and governing the actions of its member that may or may not be recognized by national law”. customary rules are best not regarded as informal, because they enjoy social sanction by a polity. They come with administrative institutions and powerful advocates and have deep cultural resonance.” (Bruce, 2007:13).

Dear Respondent, we are grateful that you have found time to fill-in the questionnaire. We value your contribution to providing information that will help build clear understanding of the Environmental social safeguards applicable to the sustainable Luangwa project in Mafinga District

You may fill-in the questionnaire **by writing directly in this file** or it will be administered to you by the consultant.

We thank you in advance.

Morgan Katati – Environmental Social Safeguards Consultant (ZIEM)

### BIO DATA

1 Full Name: .....

2 Gender

a Female

b Male

1. Village .....Department .....

2. Ethno Group/clan.....?

3. Language (s) spoken .....

4. Name of Chief /leader.....



## INSTRUCTIONS TO THE RESPONDENTS

FOR THE RESPECTIVE QUESTIONS IN THE TABLES BELOW, PLEASE WRITE:

WRITE 1 = Yes: 2 = No: 3 = Don't know: 4=Yes/No, but justify your answer

1.1.1 Human Rights (social economic and cultural rights)	1,2,3 or 4	Comments (How?)
1. Could the project activities negatively affect the standards of living or economic situation particularly for marginalized and vulnerable individuals and groups?		
2. Is it possible that affected rights-holders, particularly the most marginalized and vulnerable, might not have access to information about the project or could not fully participate in project-related decisions affecting them?		
3. Is there a risk that local people and communities affected by the project are unaware of their rights and/or lack the capacity to claim them?		
4. Is there a risk that duty-bearers involved in the project do not have the capacity to meet their obligations?		
5. Could the project activities lead to forced Labour or employment that may fail to comply with fundamental ILO principles and rights to work		
6. Have opportunities been identified to promote human rights, good governance, social and/or environmental justice in this project?		
<b>1.1.2 Gender Equality and Women's Rights</b>		
1. Could the project negatively impact the situation of women/girls or other groups based on gender?		
2. Have opportunities been identified and considered to promote gender equality in the project?		
3. Could the project potentially contribute to increased gender based violence?		
<b>If you answered "yes" to the above question, please also answer the questions below</b>		
<p>A. Is there a risk that the project could pose a greater burden on women by restricting the use, development and protection of natural resources by women compared with that of men?</p> <p>B. Is there a risk that persons employed by or engaged directly in the project might engage in gender-based</p>		

<p>violence (including sexual exploitation, sexual abuse, or sexual harassment)?</p> <p>C. Does the project increase the risk of GBV and/or SEAH for women and girls, for example by changing resource use practices?</p> <p>D. Does any mandated training for any individuals associated with the project (including project staff, government park rangers and guards, other park staff, consultants, partner organizations and contractors) cover GBV/SEAH (along with human rights etc.)?</p>		
<b>1.1.3 Children's Rights</b>		
1. Could the project negatively impact the situation of children or adolescents in the affected communities?		
2. Could the project contribute to child labour? i.e. children doing work that is mentally, physically, socially or morally harmful or dangerous to them or interferes with their schooling		
<b>1.2 Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes</b>		
1. Will the project lead to increased waste production, in particular hazardous waste?		
2. Will the project require significant consumption of raw materials, energy, or water?		
3. Will the project lead to significant increases of greenhouse gas emissions or to a substantial reduction of carbon pools (e.g. through loss in vegetation cover or below and above ground carbon stocks)?		
<b>1.2.1 Conflict Sensitivity ( Land and Resource tenure)</b>		
<p>1. Are there any major underlying tensions or open conflicts in the project's area of influence or in the areas where the project is situated?</p> <p><b>If yes, answer a and b below</b></p> <p><b>A.</b> Is it possible that the project activities might interact with or exacerbate existing tensions and conflicts?</p>		
2. Could the project create new conflicts among communities, groups or individuals?		
3. Does the project provide opportunities to bring different groups with diverging interests positively together?		

1.2.2 Climate Change	1, 2, 3 or 4	Comments
1. Have the potential impacts of climate change on the communities and ecosystems and the related risks and vulnerabilities been analyzed (e.g. climate risk analysis)?		
2. Are there any differences between hunting to meet subsistence needs and hunting for commercial purposes?		
3. Are intended social or environmental outcomes of the project sensitive or vulnerable to potential impacts of climate change?		
4. Is there a risk that the project could increase the vulnerability or decrease the resilience of any local communities or ecosystems to climate change?		
<b>Risks related to WWF Substantive Environmental and Social Standards</b>		
<b>1.2.3 Standard on Indigenous Peoples ( Local Communities)</b>		
1. Could the project affect lands, territories or resources that are inhabited by or important to Indigenous Peoples, or otherwise affect the rights, wellbeing or livelihoods of Indigenous Peoples?		
2. What might be the potential impacts of the project on the affected Indigenous Peoples?		
3. Has a process been carried out to seek the FPIC or to otherwise consult the affected Indigenous Peoples about the project?		
4. Are any of the concerned peoples living in voluntary isolation?		
5. Have opportunities been identified for how the project could benefit Indigenous Peoples?		
<b>1.2.4 Standard on Cultural Resources</b>		
1. Could the project directly or indirectly (e.g. through partners) lead to forced evictions (involuntary resettlement)?		
2. Could the project directly or indirectly lead to physically resettling peoples or communities (voluntary resettlement)? Consider also temporary resettlement.		

3. Could the project result in restrictions of peoples' access to or use of land, natural resources or ecosystem services (including social and cultural services)? Consider also temporary and partial access restrictions.		
<b>1.2.5 Standard on Community Health, Safety and Security</b>		
1. Could the activities contribute to increased risk of violence or abuse (physical, sexual, emotional, etc.) towards communities/individuals?		
2. Could the activities increase communities' exposure to infectious diseases transmitted by e.g. air, respiratory droplets, unsafe sex, contaminated water or food, or by insects or other animals?		
3. Could the activities increase communities' exposure to risk factors linked to other health conditions?		
4. Could the activities increase the exposure of communities/individuals to accidents or injuries?		
5. Could the activities increase the exposure or vulnerability of communities to natural hazards?		
<b>1.2.6 Standard on Protection of Natural Habitat</b>		
1. Does the project support economic or livelihoods activities that might lead to unsustainable use or extraction of natural resources?		
2. Might the project cause other types of adverse impacts on biodiversity, the integrity of terrestrial or aquatic ecosystems, or on ecosystem services?		
3. Will the project require significant consumption of raw materials, energy or water?		
4. Who has customary authority to sanction misbehaviors in relation to hunting?		
<b>1.2.7 Standard on Pest Management</b>		
Does the project promote the use or procurement of pesticides?		

**PART VI: Conclusion of the project screening**

Where any major issues identified in relation to each of the ESSF Cross-Cutting Principles

	Yes, no, n/a, TBD	Please list the major risks and issues you identified
--	-------------------	---

• Human Rights		
• Gender Equality and Human Rights		
• Children’s Rights		
• Conflict-Sensitivity		
• Climate Change		
• Resource Efficiency, Pollution Prevention and Management of Chemicals and Waste		
<b>Which of the Substantive Standards are triggered by the project?</b>	Yes, no, n/a, TBD	<b>Please list the major risks and issues you identified</b>
• Indigenous people		
• Cultural Resources		
• Restriction of Access and Voluntary Resettlement		
• Community Health, Safety and Security		
• Protection of Natural Habitat		
• Pest Management		

<b>Which of the safeguards risks categories do you think this project falls in (high, special consideration, medium or low)</b>	
	<b>High Risk:</b>
	<b>Special Consideration:</b>
	<b>Medium Risk:</b>
	<b>Low Risks:</b>

<b>RISK RATING</b>	<b>Criteria.</b>
High Risk (Significantly)	When the risk is of high intensity with high spread and longer duration or of high intensity with medium spread and medium duration.
Moderate Risk (Special Consideration)	When the impact is of moderate intensity with high spread and longer duration or of high intensity with low/ moderately spread and of short duration.
Medium Risk	When the impact is of low intensity but moderately spread and of moderate duration or of moderate intensity.
Low Risk	When the impact is of low intensity, limited spread and of short duration.
Beneficial	When the impacts are positive.