



Ministry of National Development Planning
Interim Inter-Ministerial Climate Change Secretariat

**ZAMBIA INTEGRATED FOREST
LANDSCAPE PROJECT**

**ENVIRONMENTAL AND SOCIAL MANAGEMENT
FRAMEWORK**

20 January 2017

EXECUTIVE SUMMARY

PROJECT BACKGROUND

The Zambia Integrated Forest Landscape Project (ZIFLP) encompasses a series of investments from the BioCarbon Fund (BioCF), Global Environmental Facility (GEF) and the International Development Agency (IDA) that lead ultimately to results-based payments for carbon storage and reduced carbon emissions resulting from reduced deforestation and degradation (ICCS, 2016d). ZIFLP fits within a longer-term program and vision of the Government of Zambia, including the Preparation phase sponsored by GRZ and the WB, the Implementation phase under the current ZIFLP with financing by the BioCF grant, an IDA credit, and a GEF grant, to create the necessary enabling environment and finance the livelihood investments in agriculture, forestry, and wildlife as well as the biodiversity conservation investments specific to the GEF. Financing from the GRZ itself and a range of other donors will be making the investments necessary to set the stage for emissions reduction purchases. This stage of the Project is focused on the Eastern Province and six districts.

This Environmental and Social Management Framework (ESMF) has been prepared to screen, mitigate, and monitor the ZIFLP subprojects to ensure that the implementation and operation of these subproject activities do not result in adverse environmental and social impacts or at a minimum reduce impacts to acceptable levels. A Resettlement Policy Framework (RPF) and a Process Framework (PF) have also been prepared as separate documents.

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK OBJECTIVES

The specific features of the ESMF are:

- Lay out the processes, procedures and requirements through which ZIFLP activities will be implemented to ensure compliance with World Bank (WB) safeguards policies and Zambian policies and legislation;
- Minimize and mitigate any potential negative safeguard risks and impacts of the ZIFLP sub-projects;
- Ensure the social and environmental integrity of the Project's activities; and
- Define the agency and organization roles and responsibilities for managing and monitoring environmental and social concerns related to the Project's activities.

PROJECT DESCRIPTION

The Project Development Objective (PDO) of the ZIFLP is to improve landscape management and increase the flow of benefits for targeted rural communities in the Eastern Province (World Bank, 2016a). The targeted districts are: Nyimba, Petauke, Katete, Chipata, Lundazi and Mambwe, and the project components include:

- Enabling Environment;

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- Livelihood and Low Carbon Investments;
- Project Management; and
- Contingent Emergency Response

Component 1: Enabling Environment

This first component is intended to help create conditions that will allow the livelihood investment of Component 2 to be successfully implemented. This entails supporting plans, partnerships, and regulatory conditions to help rural communities in the project area to be well placed and to have the capacity to adopt sustainable and low-carbon land management practices. The component would include support for (i) institutional strengthening and regulatory framework improvement in targeted districts across the province which are deforestation hotspot, for coordination of delivery of actions to address deforestation with stakeholders; (ii) support to planning processes at both district and local levels; and (iii) private sector engagement to foster partnerships for community based natural resource management, and leverage existing private sector investments to improve land management practices in the province. In addition this component will support establishment of the REDD+ architecture for GRZ to receive future results-based emission reductions payments for the Eastern Province. Enabling environment interventions will be financed through grant support from the BioCarbon Fund-ISFL and IDA credit.

Component 2: Livelihood and Low-Carbon Investments

Component 2 will finance on-the-ground activities that improve rural livelihoods and reduce GHG emissions. It has 3 subcomponents: Upscaling climate-smart agricultural practices, Community-based forestry management, and Wildlife management. These activities will be financed by IDA and GEF resources. Although the subcomponents are sectoral in nature, the cross-sectoral and landscape approach of the planning activities that will underlie the activities will ensure a landscape approach is retained.

Component 3: Project management

This third component will finance activities related to national and provincial-level project coordination and management, including annual work planning and budgeting; fiduciary aspects (financial management and procurement); human resource management; safeguards compliance monitoring; M&E and impact evaluation studies; and communication strategy and citizen engagement. Funds will cover the cost of management unit contract staff, and operations and maintenance (O&M) costs, such as office space rental charges, fuel and spare parts of vehicles, office equipment, furniture, and tools, among others. It will also finance the costs of project supervision and oversight provided by the National Project Steering Committee and National Technical Committee (or the Provincial Project Steering Committee), and other project administration expenses.

Component 4: Contingent Emergency Response

This zero budget component is included to facilitate the use of IDA funds in the event of a disaster and to be able to respond quickly to a potential Government request to

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reallocate some funding from existing World Bank projects to provide emergency relief.

STAKEHOLDER CONSULTATIONS

The ESMF preparation included stakeholder consultations, and the key Project stakeholders identified for consultations included government ministries, government agencies, NGOs, royal establishments, community leaders and local communities in the study area.

Meetings were held with key officials and opinion leaders to gauge the level of awareness and involvement with the proposed Project, concerns of Project implementation, and to obtain relevant documents or baseline information. The consultations also served to gather information on institutional mandates and permitting requirements to inform the development of the Project.

ENVIRONMENTAL AND SOCIAL BASELINE

The Project area lies in the Luangwa watershed with two distinct landscapes, the plateau and the valley. The major part of the province lies on the Central African Plateau, which rises to an altitude of 900 – 1200 metres above sea level, whilst a smaller part of it lies in the Luangwa Valley at 300 – 600 metres above sea level. The ESMF provides an overview of key environmental and social features in the Province.

Important considerations around land tenure, land and natural resource use and the drivers of deforestation are presented. Gender issues are also highlighted.

SAFEGUARDS REVIEW

The ESMF was developed by carrying out a number of activities including the following: literature review; stakeholder analysis; analysis of baseline environmental and social data; site visits and field assessments; interviews and focus group discussions; and the analysis of WB safeguard policies and Zambian policies, legislation and international agreements.

ESMF PROCESSES

This ESMF details the processes, procedures and requirements through which the ZIFLP activities will be implemented to ensure compliance with WB safeguards and Zambian policies and legislation. It also defines the roles and responsibilities for managing and monitoring environmental and social concerns related to the Project's activities.

A typology of subproject activities is presented along with World Bank and Zambia environmental classification. This subproject typology is then analyzed in terms of potential environmental and social impacts and issues with a parallel set of mitigation measures. A subproject screening process is presented with specific tools for subproject implementers.

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ACRONYMS AND ABBREVIATIONS

| | |
|---------|---|
| ADC | Area Development Committee |
| AFOLU | Agriculture, Forest and Other Land Use |
| AIDS | Acquired Immuno Deficiency Syndrome |
| AWP&B | Annual Work Planning and Budgeting |
| BP | Bank Procedure |
| BSM | Benefit Sharing Mechanism |
| BioCF | BioCarbon Fund |
| CA | Conservation Agriculture |
| CAC | Camp Agriculture Committee |
| Cap | Chapter |
| CBD | Convention on Biological Diversity |
| CBNRM | Community Based Natural Resource Management |
| CBO | Community Based Organization |
| CCA | Community Conservation Area |
| CDD | Community Driven Development |
| CDP | Community Development Plan |
| CFMG | Community Forest Management Group |
| CITES | Convention on International Trade in Endangered Species of Wild Flora and Fauna |
| COMACO | Community Markets for Conservation |
| COMPACI | Competitive African Cotton Initiative |
| CRB | Community Resource Board |
| CSA | Climate Smart Agriculture |
| CSO | Civil Society Organization/ Central Statistical Office |
| DDCC | District Development Coordinating Committee |
| DDT | Dichlorodiphenyltrichloroethane |
| DNPW | Department of National Parks and Wildlife |
| DPCU | District Program Coordination Unit |
| EA | Environmental Assessment |
| EAC | Environmental Assessment Committee |
| ECZ | Environmental Council of Zambia |
| EHS | Environmental, Health and Safety |
| EIA | Environmental Impact Assessment |
| EIS | Environmental Impact Statement |
| EMA | Environmental Management Act |
| EPB | Environmental Project Brief |
| EPPCA | Environmental Protection and Pollution Control Act |
| ESIA | Environmental and Social Impact Assessment |
| ESMF | Environmental and Social Management Framework |
| ESMP | Environmental and Social Management Plan |
| FD | Forestry Department |
| FMP | Forest Management Plans |
| FR | Forest Reserve |
| GEF | Global Environmental Facility |
| GHG | Greenhouse Gas |
| GMA | Game Management Area |
| GMO | Genetically Modified Organism |

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| GRZ | Government of the Republic of Zambia |
| HDI | Human Development Index |
| HIV | Human Immuno Virus |
| HR | Human Resource |
| HWC | Human Wildlife Conflict |
| ICCS | Interim Climate Change Secretariat |
| IDA | International Development Agency |
| ILUA | Integrated Land Use Assessments |
| IMF | International Monetary Fund |
| ISFL | Initiative for Sustainable Forest Landscapes |
| ISFM | Integrated Soil Fertility Management |
| ITCZ | Inter Tropical Convergence Zone |
| IUCN | International Union for Conservation of Nature |
| M&E | Monitoring and Evaluation |
| MDAs | Ministries, Departments and Agencies |
| MDG | Millennium Development Goal |
| MLNREP | Ministry of Lands, Natural Resources and Environmental Protection |
| MNDP | Ministry of National Development Planning |
| MRV | Measuring, Reporting and Verification |
| MTEF | Medium Term Expenditure Framework |
| NAPA | National Adaptation Program of Action |
| NBSAP | National Biodiversity Strategy and Action Plan |
| NCCRS | National Climate Change Response Strategy |
| NDCC | National Development Coordinating Committee |
| NGO | Non-Governmental Organization |
| NHCC | National Heritage Conservation Commission |
| NP | National Park |
| NPU | National Program Unit |
| NRP | National Resettlement Policy |
| NTCA | Nyika Transfrontier Conservation Area |
| NWFP | Non Wood Forest Product |
| O&M | Operation and Maintenance |
| OP | Operational Policy |
| PCB | Polychlorinated Biphenyl |
| PDCC | Provincial Development Coordinating Committee |
| PDO | Project Development Objective |
| PF | Process Framework |
| PID | Project Information Document |
| PIU | Project Implementation Unit |
| PMP | Pest Management Plan |
| POP | Persistent Organic Pollutant |
| PPE | Personal Protective Equipment |
| PPCR | Pilot Program for Climate Resistance |
| PPCU | Provincial Program Coordination Unit |
| PPSC | Provincial Planning Sub-committee |
| PPU | Provincial Planning Unit |
| R&D | Research and Development |
| RAP | Resettlement Action Plan |
| REDD+ | Reducing Emissions from Deforestation and Forest Degradation |
| REL | Reference Emission Level |
| RPF | Resettlement Policy Framework |

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| R-SNDP | Revised-Sixth National Development Plan |
| SADC | Southern African Development Community |
| SALM | Sustainable Agriculture Land Methodology |
| SESA | Strategic Environmental and Social Assessment |
| SI | Statutory Instrument |
| TFCA | Trans Frontier Conservation Area |
| TNC | The Nature Conservancy |
| ToR | Terms of Reference |
| UNCCD | United Nations Convention to Combat Desertification |
| UNCED | United Nations Conference on Environment and Development |
| UNFCCC | United Nations Framework Convention on Climate Change |
| UNIQUE | UNIQUE Forestry and Land Use |
| VPC | Village Productivity Committee |
| WB | World Bank |
| WDC | Ward Development Committee |
| ZEMA | Zambia Environmental Management Agency |
| ZIFLP | Zambia Integrated Forest Landscape Project |

1. INTRODUCTION

1.1 PROJECT BACKGROUND

The Zambia Integrated Forest Landscape Project (ZIFLP) encompasses a series of investments from the BioCarbon Fund (BioCF), Global Environmental Facility (GEF) and the International Development Agency (IDA) that lead ultimately to results-based payments for carbon storage and reduced carbon emissions resulting from reduced deforestation and degradation (ICCS, 2016d).

The Government of Zambia is currently supporting a National REDD+ Readiness process, which includes the development of a National REDD+ strategy that provides a national vision on strategic options, actions and responses to support REDD+ in Zambia. Among other outcomes, the strategy provides overall guidance on actions to be undertaken in key sectors such as agriculture, energy and land use more broadly, as well as guidance on thematic and core design issues such as incentive payments, financing, benefit sharing, safeguards, carbon rights, conflict management, measurement, reporting and verification (MRV) systems, and Reference Emission Levels/Reference Levels, amongst others. A technical assistance program funded by the Forest Investment Program (FIP) and administered through the World Bank is currently ongoing to prepare the Investment Plan for the National REDD+ Strategy, and is complementary to ZIFLP. The ZIFLP is fully aligned with Zambia's National REDD+ Strategy.

The BioCarbon Fund's (BioCF) Initiative for Sustainable Forest Landscapes collaborates with countries around the world to reduce emissions from the land sector through smarter land use planning, policies, and practices. Through these catalytic efforts, millions of tons of emissions can be reduced but, just as important, the investments and capacity built can improve livelihoods, reduce poverty, and ensure the long-term sustainability of these countries' economies. The ISFL seeks to promote reduced greenhouse gas emissions from the land sector, from deforestation and forest degradation in developing countries (REDD+), and from sustainable agriculture, as well as smarter land-use planning, policies and practices. Operating at the scale of the jurisdictional landscape is considered one of the key design features of the ISFL. It is a prerequisite to allow national or jurisdictional governments to consider the trade-offs and synergies between different land-uses that may compete in a jurisdiction—such as agriculture, energy, and forest protection and successfully identify integrated solutions that serve multiple objectives. Adopting a landscape approach means implementing a development strategy that is climate smart, equitable, productive and profitable at scale and strives for environmental, social, and economic impact. The ZIFLP's engagement of the private sector in landscape conservation is another key design feature that sets ISFL apart from previous climate and forest initiatives. The ZIFLP will give recognition and show important role that the private sector plays in spurring innovation, leveraging cutting-edge expertise and knowledge, and mobilizing capital necessary to scale up successful land-use practices and accelerate the greening of supply chains.

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The Zambia Integrated Forest Landscape Project fits within a longer-term program and vision of the Government of Zambia. It can be considered as constituting three phases: the Preparation phase, where the GRZ and the WB undertook a series of preparatory activities such as studies and project preparation. The Implementation phase is essentially all the activities that are included under the current ZIFLP. In this phase, financed by the BioCF grant, an IDA credit, and a GEF grant, the GRZ will create the necessary enabling environment and finance the livelihood investments in agriculture, forestry, and wildlife as well as the biodiversity conservation investments specific to the GEF. Financing from the GRZ itself and a range of other donors will be making the investments necessary to set the stage for emissions reduction purchases.

Finally, under the Emissions reduction phase, the BioCF will purchase carbon emission reductions under an ERPA that is to be negotiated and signed in the near future. The World Bank plans to process this project as an emissions reduction purchase project.

This Environmental and Social Management Framework (ESMF) has been prepared to screen, mitigate, and monitor the ZIFLP subprojects in order to ensure that the implementation and operation of these subproject activities do not result in adverse environmental and social impacts or at a minimum reduce impacts to acceptable levels. A Strategic Environmental and Social Assessment (SESA) will be prepared to assess and manage the large-scale impacts emanating from changes in policy and general REDD+ strategic interventions.

1.2 ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK OBJECTIVES

The specific features of the ESMF are:

- Lay out the processes, procedures and requirements through which ZIFLP activities will be implemented to ensure compliance with World Bank (WB) safeguards policies and Zambian policies and legislation;
- Minimize and mitigate any potential negative safeguard risks and impacts of the ZIFLP sub-projects;
- Ensure the social and environmental integrity of the Project's activities; and
- Define the agency and organization roles and responsibilities for managing and monitoring environmental and social concerns related to the Project's activities.

1.3 PROJECT DESCRIPTION

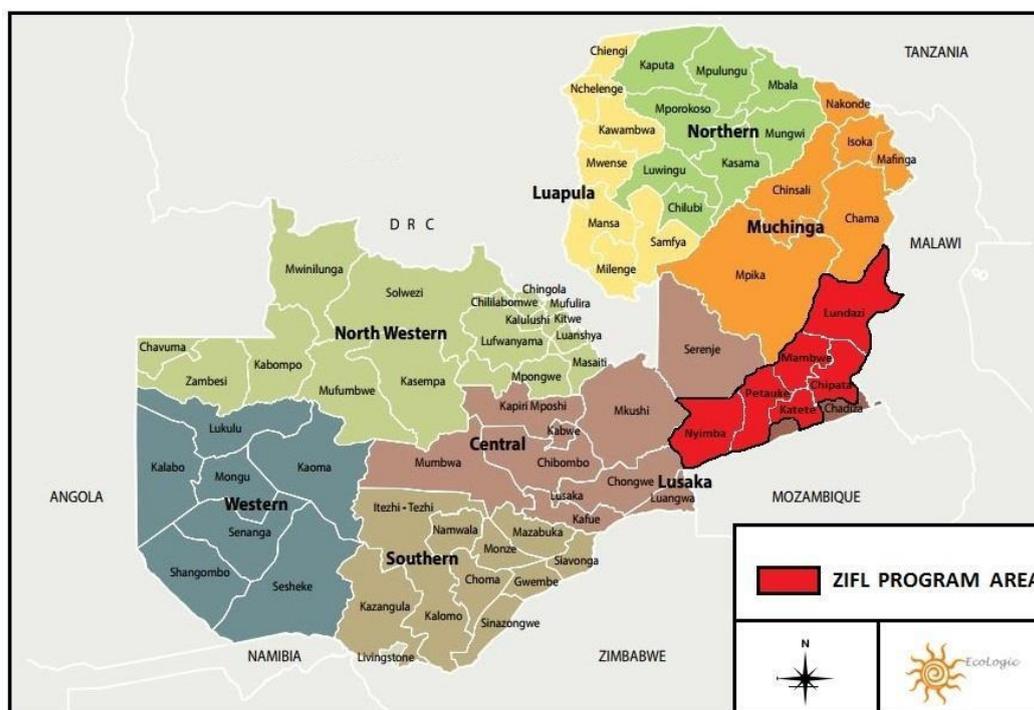
Project Development Objective

The Project Development Objective (PDO) of the ZIFLP is to improve landscape management and increase the flow of benefits for targeted rural communities in the Eastern Province (World Bank, 2016a). The targeted districts are: Nyimba, Petauke, Katete, Chipata, Lundazi and Mambwe, and the project components include:

- Enabling Environment;
- Livelihood and Low Carbon Investments;
- Project Management; and

- Contingent Emergency Response

Figure 1: ZIFL Project Area



Source: Zambia Environmental Atlas, ZEMA, 2012

Component 1: Enabling Environment

This first component is intended to help create conditions that will allow the livelihood investment of Component 2 to be successfully implemented. This entails supporting plans, partnerships, and regulatory conditions to help rural communities in the project area to be well placed and to have the capacity to adopt sustainable and low-carbon land management practices. The component would include support for (i) institutional strengthening and regulatory framework improvement in targeted districts across the province which are deforestation hotspot, for coordination of delivery of actions to address deforestation with stakeholders; (ii) support to planning processes at both district and local levels; and (iii) private sector engagement to foster partnerships for community based natural resource management, and leverage existing private sector investments to improve land management practices in the province. In addition this component will support establishment of the REDD+ architecture for GRZ to receive future results-based emission reductions payments for the Eastern Province. Enabling environment interventions will be financed through grant support from the BioCarbon Fund-ISFL and IDA credit.

Sub-Component 1.1. Institutional and Regulatory Framework. The sub-component will provide resources to support activities to strengthen the institutional and regulatory framework for implementation of the project and will focus on (i)

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Institutional strengthening at national level; and (ii) policy and regulatory reforms relevant to improved agriculture, forest and land management.

Specifically, the sub-component will support policy and regulatory reforms considered necessary to moving forward the ZIFLP. Investments would include consultants for specialized studies, consultation workshops, and legal consultants. The sections below outline policy gaps and needed reforms that were identified during the preparation phase.

Agricultural policy issues. Input Subsidies and Maize Price Support Policies. Public Expenditure is skewed towards fertilizer subsidies under the Farmers Input Support Program (FISP) and maize price support under the Food Reserve Agency (FRA). These two programs jointly account for anywhere between 50 to 70 percent of Government expenditures on agriculture. Although fertilizer and maize subsidies are categorized as Poverty Reduction Programs, they benefit only 10 to 20 percent of Zambia's smallholders, who are in fact the better-off households with the highest incomes. They crowd out essential productivity enhancing investments such as research and development (R&D) and irrigation. These expenditures do not bring about long-term, pro-poor growth, diversification, and do not foster competitive, private sector-driven food and cash crop production and marketing systems. The mismatch of expenditure priorities is undermining future sector growth, and is currently stunting the sector's poverty reducing potential.

The project will support policy dialogue to encourage policy makers to adopt a rules-based system to reform maize marketing policy and the fertilizer subsidy program by introducing higher degrees of transparency, predictability and cooperation towards the private sector. The project would also foster private-sector led input markets, for example the e-voucher input program currently being piloted in Southern and Central provinces.

Forestry policy issues. The Government of Zambia has recently revised its Forest Act to enhance community-based planning and management of natural resources. The ZIFLP will help the GRZ implement critical components of its recently established Forest Act. In terms of driving policy reform and development the ZIFLP will provide funding for streamlining the application and registration process for villages and communities for seeking community forest management rights and also support an awareness initiative to communicate the benefits of obtaining community forest management rights. In the Eastern Province, several of the Act's provisions will be put in practice for the first time at the community level and there will be a need to develop processes and regulations to facilitate systematic implementation. For example, the application process for villages and communities to apply and register community forest management agreements is being developed. The project will provide support and inputs to Government policy development and for the implementation process with particular attention paid to supporting best management forestry practices such as those described in FAO's Sustainable Forest Management (SFM) Toolbox located at <http://www.fao.org/sustainable-forest-management/toolbox/en/>.

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Wildlife policy issues. The Wildlife Act was approved by the GRZ in 2015. It notably redefines how the community resource boards (CRBs) function and more clearly defines rights and responsibilities of communities and the Government with respect to wildlife management. Specific regulations are missing to implement the provisions of the Act; this project will provide support to DNPW in their formulation and consultation. A major focus of the GWP is tackling poaching and reducing wildlife crime not just at specific sites but also at national and even global levels. Under the ZIFLP, support will be provided to wildlife crime initiatives of the GRZ at the national, sub-regional, and global level. As many actors are currently providing support to a range of countries in Africa on combatting regional wildlife crime, during the first year of the project financing gaps will be identified for ZIFLP support. ZIFLP will not finance the purchase of firearms.¹

Sub-component 1.2 Regularization of land and resource rights. The sub-component will provide analytical and technical assistance support to carefully evaluate and where necessary expand past and ongoing efforts at documenting land rights to develop the regulatory and institutional preconditions for a larger-scale effort at rural land rights registration that, by feeding into the National Land Titling Program, could underpin adoption of sustainable low-carbon land management practices and private sector engagement. This will be achieved by (i) developing cost-effective systems to sustainably manage information on land rights and link it to land use; (ii) identifying new ways of private sector engagement based on an assessment of the extent and impact of existing arrangements; (iii) designing ways of documenting different types of land rights in ways that are supported by local stakeholders, provide incentives for sustainable land use and intensification as appropriate, and can be sustained; and (iv) exploring ways to link land rights documentation to key parameters of land use (crop cover, soil moisture, soil carbon) using remotely sensed imagery to allow continued monitoring and independent verification of the impact of different types of interventions.

Sub-component 1.3 Private sector Engagement. The ZIFLP will seek to engage private sector agribusiness companies. They are important in the EP as many operate in outgrower schemes with large smallholder farmer networks. Activities will include assessment of the potential for private sector support for forestry activities such as outgrower schemes for woodlots/plantations. The project will try to influence these production networks to reduce land-based greenhouse gases associated with deforestation and agricultural production practices. Many of these companies do have interest in reducing land-based emissions, however are not aware of cost effective sustainable land management measures that they can promote or how premium pricing schemes can be implemented to better market their product. Thus the ZIFLP will provide business case analyses for private agribusiness companies working in the Eastern Province to help them fulfil their sustainability commitments. Such studies could also identify potential services from the World Bank Group's International

¹ The financing will categorically exclude any kind of support for activities that are prohibited by the Bank's policies and rules as outlined in "Legal Vice Presidency Annual Report FY 2013: The World Bank's Engagement in the Criminal Justice Sector and the Role of Lawyers in the "Solutions Bank".

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Finance Corporation (IFC) to assist agribusiness companies with their zero deforestation commitments in the Eastern Province. To date, the BioCarbon Fund has begun working with the Competitive African Cotton Initiative (COMPACI), which is a producer group of two major cotton companies NWK Agri-services and Alliance Ginneries. COMPACI has a zero deforestation commitment instituted in their mandate but to date companies have not enacted such sustainability measures into their production. The ZIFLP will start by engaging the COMPACI group members and then proceed to work with other agribusiness companies in the Eastern Province.

Sub-component 1.4. District and local planning. The sub-component will provide resources to support the following activities: (i) Institutional strengthening at the sub-national level; (ii) Developing integrated district plans in six districts in the province; and (iii) Support for local planning instruments.

Sub-component 1.5. Technical framework for payments for emission reductions. There are substantial technical requirements that must be met in order for Zambia to eventually receive results-based payments for emission reductions at the jurisdictional level in accordance with the methodological guidance and the principles of results-based payments under the BioCF-ISFL.

Component 2: Livelihood and Low-Carbon Investment

Component 2 will finance on-the-ground activities that improve rural livelihoods and reduce GHG emissions. It has 3 subcomponents: Upscaling climate-smart agricultural practices, Community-based forestry management, and Wildlife management. These activities will be financed by IDA and GEF resources. Although the subcomponents are sectorial in nature, the cross-sectorial and landscape approach of the planning activities that will underlie the activities will ensure a landscape approach is retained.

Before any investments are made in a community, there needs to be support to planning and community strengthening. This support will be funded through Component 1.1. Communities will be able to choose activities they want from a “menu” of possible sub-investments that will be available to them, tailored according to their geographic location, the type of landscape they are in, and based on available funding allocated to each broad type of investments. The full details of how the selection process will take place at the local level will be outlined in the Project Implementation Manual (PIM).

Potential criteria for selection of communities receiving investment support:

- Communities that have completed land use planning;
- Communities in hotspot deforestation districts (Petauke, Mambwe, Katete, Lundazi and Nyimba) with high risk of conversion to agriculture;
- Established Community Forest Management Group; and
- Potential to leverage on existing support

Sub-component 2.1. Upscaling climate-smart agricultural practices. The objective of

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this subcomponent is to provide financing for interventions that increase agricultural productivity, enhance agroecosystem resilience and reduce GHG emissions. These include conservation agriculture (CA) practices, integrated soil fertility management, agroforestry, and crop value chain development. Interventions will aim at enhancing the income and livelihood of the communities and farmer families through income generating and value added activities in the six districts targeted by the project, namely Chipata, Katete, Petauke, Mambwe, Nyimba, and Lundazi.

This component aims to scale up CSA practices for smallholder farmers through financing support for interventions that increase agricultural productivity, enhance agro-ecosystem resilience and reduce GHG emissions. The component's objective would be achieved through the introduction of tested best practices in CSA and sustainable land management. Project funds will focus on strengthening agricultural extension by addressing CSA skills gap of extension officers and farmers in the form of targeted trainings (e.g., workshops, exchange visits, production of field manuals), and field-based learning (e.g., site visits, demonstration plots and pilots) provided by competent institutions such as ZARI, CGIAR, and relevant NGOs among others. Specific interventions the component will focus on include (a) conservation agriculture (CA) and integrated soil fertility management practices (ISFM), (b) agroforestry, and (c) agriculture and marketing value chains. The project will provide funds for these activities through various funding instruments, such as matching grants, micro loans, credit guarantee schemes, and technical support consultancies.

Sub-component 2.2. Community-based forestry management. The objective of this sub-component is to assist local communities and their organizations to improve the management and conservation of their natural resources, create income opportunities, and generate carbon benefits. This will be accomplished by developing and implementing participatory land and resource use planning and management – including fire control and prevention-and providing specialized technical assistance and training to identify viable investments from the sustainable production of timber and not-timber forest products. Activities to be supported will be consistent with the land and resource use plans developed at the village and district levels. The sub-component would finance specialized technical and extensions services, small works and equipment, operational costs and non-consultant services (e.g. workshops and study tours). More specifically, the sub component will support:

- *Community Forestry Management Groups (CFMG).* Based on the Forest Act of 2015 and its regulations, the Project will assist Villages from selected Chiefdoms and Districts to identify and establish (CFMG). Support will include preparation and approval of Community Forestry Management Agreements, and their formal registration.
- *Forest Management Plans.* The Project will support CFMGs to develop and implement forest management plans that are consistent with Village land use plans and follow the guidelines and specifications established in the Forest Act and its regulations. These plans will identify sustainable investments and activities that lead to improving livelihoods and reduce deforestation/degradation.

- *Community Forestry Enterprises.* Based on the assessment and productive potential of natural resources identified in forest management plans, the Project will finance small scale investments that fulfil the dual criteria of generating monetary and non-monetary income, and generate carbon related benefits. Support will include technical assistance for resource management and production, establishment of small community enterprises, markets studies, and commercialization skills. Investments under this category may include the cultivation or extraction of any forest and non-forest product that can be sustainably managed in the communal forest area of reference. Some examples include: Bee keeping, sustainable charcoal, wood-lots for fire wood production, carpentries for furniture, medicinal herbs, eco-tourism and recreational activities, commercial timber plantations, grass harvesting and grazing of animals, etc.
- *Fire management and prevention.* Fire is an important element in rural landscapes, and when management properly, it can be beneficial for agriculture, however, if it goes out of control can destroy forests and generate emissions. To reduce this risk, the Project will support activities to revive and enforce the village level fire ordinances that were functional and effective in the past; and draw upon the lessons from other regions, to prepare community by laws on fire management. The Project will also support local governments and communities on training and incentives for fire management and prevention and financing small works and equipment for fire line clearance and maintenance.
- *Forest management near protected areas.* The Project will dedicate special efforts to work with Villages and communities in buffer zones and connecting corridors to reduce pressure on protected areas. The Project will work with existing CRBs and CFMG to develop and finance forest management plans that focus on alternative productive and conversation activities to protect or improve wildlife habitat. Efforts invested by communities in these activities could be compensated by revenues from the wildlife reserves and administered by CRBs, or capture other benefit sharing income from carbon markets.

Sub-component 2.3. Wildlife management. This sub-component will have two major focus areas: i) improved management of the complex of protected areas centred on Lukusuzi National Park in the Eastern Province; and ii) adoption of improved management practices of wildlife at the community level, which can contribute to improved livelihoods of targeted communities. The project will support (i) preparation of park management plans; (ii) investments in infrastructure such as guard houses or other park buildings, upgrading of existing roads and tracks to facilitate park management and ecotourism, provision of water holes, fencing (only in limited areas where judged necessary to minimize HWC); (iii) purchase of equipment such as radios for communication, park guard equipment, patrol equipment, etc.; and (iv) support to park patrols, with a particular focus on management of poaching.

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With respect to *improved adoption of wildlife management practices*, the Project seeks to promote practices which will maximize opportunities for rural communities from adjacent wildlife resources. These investments will focus on rural communities of the EP in the vicinity of the Lukusuzi and Luambe National Parks. It should be noted that the activities to be supported will in most cases take place in the same communities targeted for agriculture and forestry investments and the various activities will be planned and implemented in coordination and so as to enhance synergies.

Specific activities to be supported to both contribute to economic returns to local communities from wildlife management and to minimize negative impacts will include:

- Consultations with adjacent communities adjacent to the protected areas and establishment of co-management processes and instruments;
- Mitigation of human-wildlife conflict (HWC) where necessary;
- Support to incipient ecotourism initiatives such as local ecotourism strategies, community training, infrastructure;
- Awareness-raising activities;
- Supporting local involvement and management of game management areas so as to maximize returns from photo safaris and hunting, both a potentially important source of funding to communities;
- Improved management of subsistence hunting, where legally allowed, so as to provide food but to ensure sustainable management of game resources; and
- Possible extension of COMACO model where communities receive support for agricultural investments but are financially compensated for simultaneously protecting wildlife resources.

As concerns *direct support to protected area management*, the Project will focus on the complex of protected areas centered on Lukusuzi National Park. Lukusuzi National Park falls within the Nyika Trans-frontier Conservation Area (NTCA) adopted by the governments of Zambia and Malawi. The ZIFLP will support management investments in Lukusuzi National Park, in the surrounding game management areas, and in adjacent Luambe National Park.

Livelihood restoration: Since the Project will work with protected areas, the Project's Process Framework (in a separate document) outlines the process for providing livelihoods-related support during Project implementation to people affected by Project-induced restrictions of access to natural resources within protected areas, in Eastern province. As part of this process, Project implementation will include the preparation and subsequent implementation of Livelihood Restoration Plans, which will provide tailored livelihood support and benefit sharing for nearby communities. In cases where well-organized communities have produced their own investment plans (e.g. CRBs), this livelihood support will be channelled through the appropriate community mechanisms. Communities and households around the Project-supported protected areas will be provided with opportunities to restore their livelihoods to at least pre-Project levels. The LRPs prepared under this Project will take into account

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any ongoing livelihoods-related support from other sources.

In all of the targeted protected areas in Zambia, the Project will provide funding through the Department of National Parks and Wildlife (DNPW) to carry out the following activities (see details in a separate document and in Project budget tables):

- Preparation of park management plans;
- Investments in infrastructure such as guard houses or other park buildings, upgrading of existing roads and tracks to facilitate park management and ecotourism, provision of water holes, fencing (only in limited areas where judged necessary to minimize HWC);
- Purchase of equipment such as radios for communication, park guard equipment, patrol equipment, etc.;
- Support to park patrols, with a particular focus on management of poaching;
- Support to bi-national initiatives with Malawi for joint management measures within the existing framework of the NTCA and the long-term creation of biological connectivity between Kasungu National Park in Malawi and the Luangwa valley complex of protected areas in Zambia; and
- Development of livelihood restoration plans.

Component 3: Project management

This third component will finance activities related to national and provincial-level project coordination and management, including annual work planning and budgeting; fiduciary aspects (financial management and procurement); human resource management; safeguards compliance monitoring; M&E and impact evaluation studies; and communication strategy and citizen engagement.

Funds will cover the cost of management unit contract staff, and operations and maintenance (O&M) costs, such as office space rental charges, fuel and spare parts of vehicles, office equipment, furniture, and tools, among others. It will also finance the costs of project supervision and oversight provided by the National Project Steering Committee and National Technical Committee (or the Provincial Project Steering Committee), and other project administration expenses.

This component will also finance the costs and activities specific to the National Planning Unit (NPU) and the Provincial Planning Unit (PPU). Funding is also reserved for the NPU and PPU to support the preparation of possible follow-up investments or projects, including the preparation of background studies, project documents, and necessary consultation processes.

Component 4: Contingent Emergency Response

This component is included to facilitate the use of IDA funds in the event of a disaster and to be able to respond quickly to a potential Government request to reallocate some funding from existing World Bank projects to provide emergency relief.

1.4 INSTITUTIONAL ARRANGEMENTS

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The major investments of the ZIFLP project are intended to be decentralized, to the lowest level possible, in order to have funds managed and controlled by beneficiaries. However, there are some project investments, which are national in scope such as those related to REDD+ policy, MRV, policies, national-level institutional strengthening, etc. Implementation of ZIFLP will therefore require implementing agencies at both the national and Eastern Province levels.

At the national level, the Interim Climate Change Secretariat (ICCS) under the Ministry of National Development Planning (MNDP) will represent the Government of the Republic of Zambia and will host the National Project Unit (NPU). The ICCS will be the National Implementing Agency for the ZIFLP.

At the provincial level, the Provincial Administration of the EP will host the Project Implementation Unit (PIU). The Provincial Administration of the EP will be the Executing Agency of the project. This arrangement follows the decentralization policy of government and aims to devolve decision-making to sub-national structures to enable more efficient project implementation.

Annual Work Planning and Budgeting (AWPB) for the project will be submitted through the NPU for World Bank's approval after clearance by i) the MNDP Permanent Secretary (PS) for the NPU national-level activities; and ii) the PS of the Eastern Province for the sub-national level activities.

National level

Overall project policy guidance will be provided by the ZIFLP National Project Steering Committee (NPSC), which will be chaired by the Permanent Secretary of the MNDP. The members of the NPSC will include PSs from the relevant line ministries, departments and agencies (MDAs), i.e., MOF; Agriculture, Lands; DNPW; Local Government, representative of the private sector, CSOs and NGOs. This fits into the existing government structures and current project oversight of ongoing ICCS programs.

There will additionally be a National Technical Committee (NTC) (using the existing platform) with representation from key MDAs such as the Directors of Forestry, Land, DNPW, Chairpersons of inter-governmental technical working groups, civil society and private sector. The NTC will be responsible for providing technical support and guidance to overall project implementation and advising on the national level investment proposals. The members of the NTC attending each meeting will depend on the agenda or technical advice sought by the NPU and will be at Director level.

The ZIFLP National Project Unit (as part of its core mandate, will be directly responsible for most of Component 1 and its management costs will be covered through Component 3. It will be responsible for the procurement of major studies and services related to the national component. In addition, the NPU will manage overall project reporting. It will be headed by a National Project Manager supported by an M&E officer, Finance Officer/Project Accountant, Procurement Officer, Internal Auditor, Communication Officer, and the Environmental and Social Safeguards Compliance Officer.

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The Ministry of Finance has already established an informal working group on land, co-chaired by the Surveyor General (SG) and the Director, Ministry of Finance. This Group, which also includes Ministry of Local Government, House of Chiefs, etc., will provide technical guidance on **Sub-component 1.2 Regularization of land and resource rights** implementation. The SG will represent this group and regularly report on the status of the sub component to the ZIFLP National Project Unit. Formalization of the membership of this group, and description of its responsibilities will all be finalized at appraisal.

The NPU will be responsible for preparing the Annual Work Plan and Budget (AWPB) for the national component of the investment. In addition, the NPU will consolidate the AWPB for the entire project for submission to and approval by the World Bank.

Provincial level

The Provincial Development Coordinating Committee (PDCC) chaired by the Eastern Province PS, will be responsible for providing policy support, guidance and advice to the ZIFLP in relation to sectorial issues in the province. The PDCC already in place, will comprise provincial heads of government ministries including but not limited to Agriculture, Land, DNPW, Forest, Local Government and representatives from the private sector and civil society. The Provincial Planning Sub-Committee of the PDCC, chaired by the Provincial Chief Planner will be responsible for the day to day oversight on the operations of the PIU including reviewing, advising and approving sub-project activities from the lower levels (districts and communities). The PPSC will also ensure that project activities are incorporated in the Provincial Integrated Development Plan (PIDP). The Provincial Planning Sub-Committee is expected to be reinforced by the inclusion of representatives from traditional authorities, CSOs, and the private sector.

The Project Implementation Unit (PIU):

This unit will be embedded into the Provincial Administration, Provincial Planning Unit (PPU). The PIU will be headed by a Provincial Project Manager (PPM) and report directly to the Provincial Chief Planner. For project progress reporting, the PPM will collaborate with the NPM. The PIU will be responsible for the day-to-day operations of the project's livelihood investments and will be supported by the PPSC. The PIU will oversee the planning, provide specialized technical support, and carry out fiduciary, safeguards and monitoring oversight of the project. The PIU will be supported by the following officers: M&E officer, Project Accountant, Procurement Officer, Internal Auditor, Communication Officer, and the Environmental and Social Safeguards Officers. The PIU will work in collaboration with the line ministry technical experts in the PPSC to provide management oversight and will be responsible for selection of the sub-grants for activities related to agriculture, forestry, and wildlife. The EP administration will be responsible for implementing small parts of Component 1, virtually all of Component 2, and their management costs will be covered through Component 3. The PIU will be responsible for preparing the Annual Work Plan and Budget (AWPB) for the Eastern Provincial level project investments, seeking advice from the EP PS before submitting to the NPU for consolidation, submission, and

approval by the World Bank.

District level

At the district level, the District Development Coordinating Committee (DDCC) chaired by the District Commissioner provides policy guidance on projects in the district. Like the provincial level, the DDCC will comprise district heads of government MDAs including but not limited to Agriculture, Land, DNPW, Forest, Local Government and representatives from the private sector and civil society. The District Planning Advisory Sub-Committee (DPSC) consisting of technical staff, traditional representatives and civil society partners will provide the day to day overall coordination and will be responsible for advising, reviewing and recommending community sub-projects from Wards and Communities. The District Planning Officers under the guidance of the DPSC will ensure that the project is integrated in existing institutional structures and mandates of the district. Districts will be responsible for implementing interventions that fall under their authority and will provide coordination responsibility over community level micro-projects that cut across several communities. In such cases, District Development Plans (DDPs) will be prepared as appropriate. Where government MDAs do not have technical establishments in the districts back stopping and or implementation support will be provided from the provincial office.

Community level

At the community level, the structure will be similar, with overall coordinating responsibilities falling under the Ward Development Committees (WDCs) that will be constituted according to local government electoral procedures. The WDCs will consist of community representatives from the respective Zones, civic leaders, government agencies (e.g. agriculture camp officers, wildlife camp officers, traditional authority representatives and civil society partners). Communities will be responsible for implementing and managing interventions at the community level with managerial oversight from the districts and the PPU. If not already existing, Ward Development Plans (WDPs) will be prepared covering plans from the Zones in a given area.

The Ministries, Departments and Agencies (MDAs): The MDAs, i.e. Agriculture, Forest, Lands, DNPW, Local Government, etc. will play a critical technical role at the sub-national levels and ensure synergy with their respective national line ministries. They will be responsible for regular technical back stopping and ensuring linkages of project investments with development plans and policy. When required, they will provide technical assistance and support, based on agreed annual work plans with the NPU and PPU, against which regular advances will be made and accounted.

2. ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK METHODOLOGY

The ESMF has been developed by carrying out a number of activities including the following: literature review; stakeholder analysis; analysis of baseline environmental and social data; site visits and field assessments; interviews and focus group discussions; and the analysis of WB safeguard policies and Zambian policies, legislation and international agreements.

2.1 LITERATURE REVIEW

A literature review was undertaken with a view to gathering relevant secondary data, and the key sources of secondary data are listed under the References/ Bibliography section of the ESMF. This process was crucial in the development of the ESMF as it informed the stakeholder analysis, analysis of baseline environmental and social data, site visits and field assessments, interviews and focus group discussions, and the analysis of WB safeguard policies and Zambian policies, legislation and international agreements.

2.2 STAKEHOLDER ANALYSIS

A stakeholder analysis was carried out at the commencement of the assignment with a view to informing the stakeholder consultations, and the key stakeholders identified and consulted are listed in Annex 1.

2.3 ANALYSIS OF BASELINE ENVIRONMENTAL AND SOCIAL DATA

Secondary baseline environmental and socio-economic data was gathered through the literature review, whilst primary data was obtained from the stakeholder consultations and field work. The purpose of the baseline data collection was to:

- Collect sufficient data on the host ecological/ biological, socio-economic, cultural heritage and community health environments to facilitate the reporting of a comprehensive and thorough baseline description of the ZIFLP area; and
- Provide sufficient information on host environment conditions to be able to analyse and predict the nature and significance of potential Project-related environmental and socio-economic impacts.

The determination of the potential environmental and socio-economic impacts of the ZIFLP was undertaken as follows:

- Identify the potential interactions between the sub-project activities and the baseline environmental/ socio-economic/ health conditions; and
- List the direct and indirect environmental/ socio-economic/ health impacts by determining the potential changes to the baseline environmental/ socio-

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economic/ health conditions, whether adverse or beneficial, resulting from the sub-project activities.

The impact “significance” for the proposed ZIFLP sub-project activities was estimated by adopting a simple approach that expresses it as being a combination of impact “magnitude” and “consequence”:

Significance = Magnitude x Consequence

In this approach, magnitude is a factor of the impact’s **frequency** of occurrence, **duration**, **severity** and **spatial extent**, whereas consequence refers to the **sensitivity** of the element being impacted or degree of change in host environment conditions as a result of the impact. Impact significance was ranked as “low” (yellow), “medium” (orange) or “high” (red) as illustrated below:

| | | Consequence | | |
|-----------|---|-------------|--------|--------|
| | | L | M | H |
| Magnitude | L | Yellow | Yellow | Orange |
| | M | Yellow | Orange | Red |
| | H | Orange | Red | Red |

Mitigation measures were then developed for each potential negative impact in a cost effective, climate smart and efficient manner.

2.4 SITE VISITS AND FIELD ASSESSMENTS

Site visits and field assessments to the study area, Lukusuzi and Luambe National Parks and surrounding areas, were carried out in order to gather relevant primary data, undertake environmental and social assessments and stakeholder consultations, and fill gaps identified during the literature review. Two site visits were undertaken, 24 October to 1 November 2016 and 27 November to 1 December 2016.

2.5 INTERVIEWS AND FOCUS GROUP DISCUSSIONS

Stakeholder consultations were on-going during the development of the PF and included engagement with the key stakeholders listed in Annex 1. Interviews and focus group discussions were conducted in the following areas:

- Lusaka;
- Chilanga;
- Chipata;
- Lundazi;
- Mwasemphangwe;

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- Chikomeni;
- Kakumba;
- Chitungulu; and
- Mwanja.

The key issues discussed are also given in Annex 1.

2.6 ANALYSIS OF WORLD BANK SAFEGUARD POLICIES AND ZAMBIAN POLICIES, LEGISLATION AND INTERNATIONAL AGREEMENTS

The ZIFLP is required to comply with the WB Safeguard Policies and relevant Zambian policies and legislation. An assessment of the WB Safeguard Policies and Zambian policies, legislation and international agreements was, therefore, undertaken so as to determine the safeguards and legal frameworks that would guide the implementation of the ZIFLP. The assessment results are given Section 4 of this ESMF.

3. BASELINE INFORMATION

3.1 LANDSCAPE AND TOPOGRAPHY

The proposed Project area lies in the Luangwa watershed with two distinct landscapes, the plateau and the valley. The major part of the province lies on the Central African Plateau which rises to an altitude of 900 – 1200 metres above sea level, whilst a smaller part of it lies in the Luangwa Valley at 300 – 600 metres above sea level.

3.2 CLIMATE

The climatic conditions in the proposed Project area are influenced by the north-south seasonal migration of the Inter Tropical Convergence Zone (ITCZ), which migrates between the equator and the Tropic of Capricorn between November and February. The districts of Nyimba, Petuake, Katete, Chipata, Lundazi and Mambwe lie in agro-ecological regions I and IIa with annual rainfall of less than 800 mm and 800-1000 mm (ZEMA, 2012), respectively. In addition, the Project area has late and reduced rainfall.

Field surveys undertaken during the site visits showed that most urban and rural areas in Chipata and Lundazi were affected by prolonged dry spells, with most rivers and streams drying up in the months of October and November, a situation that impacted most community water sources.

Mean daily maximum temperatures in the Project areas are 21-26°C from May to July, 28-35°C from August to October and 25-30°C from November to April. However, the valley areas can experience extreme maximum temperatures of up to 42°C.

3.3 HYDROLOGY

The ZIFL Project area lies in the Luangwa watershed, and the Luangwa River in Luangwa valley is drained by a network of rivers originating from the east and west of the valley. These rivers include the Mupamadzi, Lukuzye, Lubi, Lupande, Matizye, Mushilashi, Kampamba, Manzi, Lukusuzi, Lumezi, Lumimba, Chisamba, Mwasauka, Chichele and Kauluzi. Luangwa River has a drainage area of approximately 73,422 km² and a single peak hydrograph which occurs in February or March each year, reaching a mean annual discharge of 128 m³/s.

Drought occurrence is very high in the Luangwa Valley resulting in many of the tributary rivers not flowing throughout the year and even Luangwa River running extremely low during the hottest months or turning into pools during droughts.

3.4 SOILS

The Luangwa Valley is a minor arm of the Rift Valley, which contains Lake Tanganyika and Lake Malawi, and passes to the east of Zambia's borders. The underlying rock of the Luangwa Valley generally produces poor soils. However, over a long period of time weathering and erosion have shifted nutrient-rich soils from the East African Rift System down into the Luangwa valley. Thus, the floor of the Luangwa trough is overlain with a bed of fertile topsoil making it flat-bottomed, steep-sided and fertile.

The meander belt of the Luangwa River and its associated floodplains, including the areas where the main tributaries join are overlain by alluvial soils. The geological structures modified by fluvial processes of the Luangwa River and its tributaries have resulted into various soil groups, and the three major groups are: acrisols characterized by deep, fine textures, well-drained soils on the plateau; lithosol-Cambisols, developed over the bedrock of the shallow to medium depth, generally poor in nutrients characterized by stony gravel ridges; and fluvial-vertisols, which are developed over the alluvial complex along the Luangwa River and its tributaries.

Forest resources

Habitats and Vegetation Types

The Luangwa watershed has 31 and 68 national forests and local forests over an area of 1,427,492 and 227,178 ha, respectively (MLNREP, 2016). The main habitat in the area is the miombo woodland, which is evergreen with common species of *Brachystegia*, *Julbernardia* and *Isoberlinia*. Other tree species include *Colophospermum mopane* (found in pure stands), winterthorn (*Acacia albida*, a deciduous tree that provides winter-feed), *Acacia tortilis*, *Combretum imberbe*, *Acacia nigrescens*, *Monochoria africana*, wild mango - *Cordyla africana*, African ebony - *Diospyros mespiliformis*, Fig - *Ficus bussei* and *Ficus sycomorus*, and Natal mahogany - *Trichelia emetic*.

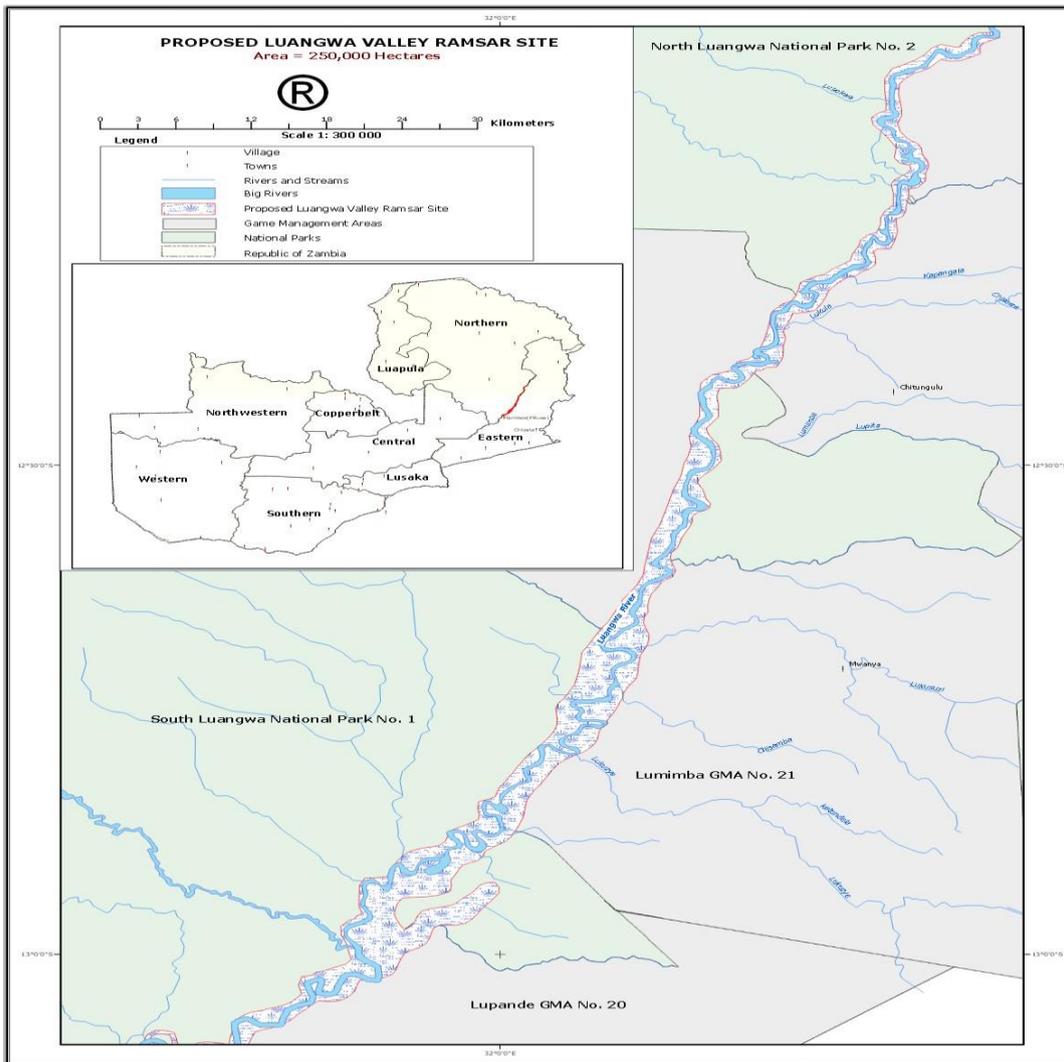
Ramsar Wetland Site

Zambia is a signatory to the RAMSAR Convention and the Luangwa Flood Plain is a designated RAMSAR site that is ecologically sensitive and subject to restrictions on development in or around the area, and Figure 2 shows the site.

The site covers part of South Luangwa National Park and the North Luangwa National Park to the northwest and the Luambe National Park to the south-east. It also encompasses portions of a number of game management areas within it, including the Munyamadzi GMA No. 24, the Lumimba GMA No. 21, and the Lupande GMA No. 20.

The Luangwa Floodplains host a number of endangered species, such as the lion (*Panthera leo*) and the elephant (*Loxodonta africana*), which the IUCN Red List classify as vulnerable. The leopard (*Panthera pardus*) is also present at the site (CITES Appendix I) as well as the African wild dog (*Lycaon pictus*) (endangered, IUCN Red List) and the Black rhino (*Diceros bicornis*) (critically endangered, IUCN Red List). Crocodile (*Crocodylus niloticus*) and hippos (*Hippopotamus amphibius*) are present too (CITES Appendix II).

Figure 2: Luangwa Flood Plain Ramsar Site



Source: rsis.ramsar.org

Wildlife resources

Overview

The Luangwa watershed has 7 national parks and 11 game management areas covering 1,711,971 and 5,115,435 ha, respectively (MLNREP, 2016). The area has large populations of elephant (*Loxodonta africana*), buffalo (*Syncerus caffer*), hippo (*Hippopotamus amphibius*), giraffe (*Giraffa camelopardalis*), lion (*Panthera leo*), leopard (*Panthera pardus*), crocodile (*Crocodylus niloticus*), warthog (*Phacochoerus aethiopicus*), puku (*Kobus vardonii*), impala (*Aepyceros melampus melampus*), zebra (*Equus burchelli*), waterbuck (*Kobus ellipsiprymnus*), bushbuck (*Tragelaphus scriptus*), cookson's wildebeest (*Connochaetes taurinus cooksoni*), hyena (*Crocuta crocuta*), kudu (*Tragelaphus strepsiceros*), eland (*Taurotragus oryx*) and various other antelopes.

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income, and a steady decline in wildlife numbers has resulted. Many of the Park's key species including black rhino, buffalo, and elephant disappeared and smaller species reduced greatly in population size. As a national park, its status became regarded as depleted, and limited park management and law enforcement resources were directed elsewhere to higher priority national parks, leaving Lukusuzi NP with a small force of 10 wildlife police officers guarding the entire Park.

The Lukusuzi NP falls under the Malawi-Zambia Trans Frontier Conservation Area (TFCA), which was formally established on 7 July 2015 and has two components: the Nyika-North Luangwa; and the Kasungu–Lukusuzi. The German Government has committed EURO18million under KfW to support infrastructure development, conservation activities, procurement of equipment, and community livelihood needs under the Nyika-North Luangwa component.

A GIZ project called “Strengthening Joint Management and Promoting Community Alternative Livelihoods in the Kasungu-Lukusuzi Component of the Malawi-Zambia TFCA” is currently being implemented in the Kasungu–Lukusuzi component. The main objective of the project is “to reduce threats of unsustainable use of natural resources in the TFCA component by strengthening various management strategies and promoting alternative livelihood options for the communities”, and the priority areas are: the Lukusuzi National Park, the Kasungu National Park, Chikomeni and Mwasemphangwe communities, as well as the communities surrounding the Kasungu NP within a 5 km buffer. The project is scheduled to end in May 2018.

Aquatic resources

The Luangwa River is very rich in aquatic species. Sixty-one fish species have been recorded, one of which is endemic (*Oreochromis mortimeri*) (Marshall, 2000). Most of the fish of this watershed are widespread, including Cichlids, cyprinids, and mormyrids, *Heterobranchus longifilis*, *Malapterurus shirensis*, *Distichodus mossambicus*, and *Distichodus schenga*. Aquatic mammals include the endangered marsh mongoose (*Herpestes palustris*), the African clawless otter (*Aonyx capensis*), the spotted-necked otter (*Lutra maculicollis*), and the hippopotamus (*Hippopotamus amphibius*). Additionally, there are 49 amphibian species; 4 reptiles, including large populations of Nile crocodiles (*Crocodylus niloticus*); and 27 molluscan species (Dudley, 2000), one of which, *Gabbiella zambica*, is endemic.

FIRES, SMOKE AND BURNING AND AIR QUALITY

The air quality is generally good due to the lack of commercial industrial facilities in the Project areas. However, seasonal deterioration in air quality is often experienced due to forest fires, charcoal production and the traditional *Chitemene* slash and burn agriculture system, which is widely practiced in the Project area.

3.5 SOCIO-ECONOMIC ENVIRONMENT

This section of the ESMF provides a description of the socio-economic environment in the Eastern Province of Zambia, and in particular in the proposed Project districts of Nyimba, Petauke, Katete, Chipata, Lundazi and Mambwe. The descriptions are based

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on the literature review and consultations and observations made during the site visits.

A recent assessment found that rural households in Eastern Province were significantly affected by climate change, but less than 1/5th of households felt prepared to counteract climate shocks. The most common household response being through altered agricultural practice (USAID, 2016).

The Project aims to counteract or mitigate challenges in regards to patterns of inequity, including gender inequities as a fundamental part of the Project design. Livelihood interventions are designed with the aim to reduce existing vulnerabilities amongst the rural population.

Population and Demographic Profile

Approximately 1.6 million people live in Eastern Province, 87 percent of whom reside in rural areas. Eastern Province has significantly lower education outcomes as compared to the national average: 26 percent of the population in the Province has no education vs. 13 percent nationally – and similar poor outcomes for primary, secondary and tertiary education attainment (IAPRI, 2016).

Table 1 shows the human population statistics for the six ZIFLP districts. According to the information presented in this table, which is derived from the 2010 population census, the human population in the proposed Project area is growing with Mambwe District having the highest population growth rate, and Nyimba the least.

Table 1: Population Statistics of the Project Area

| DISTRICT | TOTAL POPULATION | ANNUAL POPULATION GROWTH (%) | POPULATION DENSITY (PERSONS/KM2) | % RURAL | % POPULATION (AGED 0-34) | % WOMEN |
|----------|------------------|------------------------------|----------------------------------|---------|--------------------------|---------|
| Nyimba | 85,025 | 1.9 | 8 | 91 | 80 | 50.6 |
| Petauke | 307,889 | 2.7 | 37 | 90 | 81 | 50.7 |
| Katete | 243,849 | 2.6 | 61 | 91 | 81 | 50.8 |
| Chipata | 455,783 | 2.2 | 68 | 74 | 80 | 50.6 |
| Lundazi | 323,870 | 3.2 | 23 | 95 | 80 | 51.1 |
| Mambwe | 68,918 | 3.8 | 13 | 91 | 81 | 50.3 |

Source: CSO, June 2012

A consequence of this population increase is that due to the communities' dependence on agriculture, new lands are opened-up to cultivate food and provide income for the increasing population. In addition to agriculture, charcoal production is a key livelihood activity.

In Nyimba, Petauke, Katete, Mambwe, and Lundazi more than 90 percent of the population live in rural areas. These districts are also the top districts in terms of absolute forest area loss (UNIQUE, 2016a), suggesting that having a large rural population, which is poor could contribute to deforestation as well as other factors such as production methods and concentration of population per ha.

In addition to the actual growth in population, there is local migration within the Eastern Province as well as fertile land seekers within the same district/ chiefdom. The people come largely from within the same districts/ province but also from outside, and tend to settle in forested areas. In certain cases the traditional authorities and the local politicians allow people to settle even though they know it is illegal to do so, and in other instances it is done from a land grab opportunistic perspective as a result of a weak enforcement capacity. According to the 2010 population census, only the Eastern Province and Northern Province had net in-migration (CSO, 2012). The migrants encroach on the forest clearing it to open land for crop cultivation and settlement. The forest encroachment is usually detected by the government at a much later stage as the Forest Department lacks monitoring capacity – commonly when the forest has already been badly affected. The problem of migration and settlement in forested areas is compounded by political interference and expediency, where political elites and local/ traditional leaders tend to take sides with the forest encroachers or simply do not actively support any moves to control or remove them. Such encroached forests eventually become candidates for de-gazetting and resettlement. For instance, in 2005, Mvuvye FR, at the Nyimba and Petauke district borders, was de-gazetted following heavy encroachment by both locals and migrants. In Lundazi district, the Lundazi National Forest is currently encroachment. A recent assessment found that over half of villages surveyed had rules in regards to forests, for example on regards to charcoal production and tree felling, and that those rules were generally enforced (USAID, 2016).

In terms of the Lukusuzi NP, three evictions of people who have illegally settled in the Park have been undertaken by the DNPW. The first was in between 31 October and 4 November 2015, and the other two were in October and November 2016. The people tend illegally go into the Park to undertake activities such as illegal poaching, small-scale mining and farming.

Employment

There are high levels of unemployment in the Project area, with a large portion of the population being engaged in informal economic activities such as subsistence farming practices, fishing (in the rainy season), production and selling of charcoal, casual work (particularly in the agricultural sector), informal trading activities (such as vending foodstuffs) and the production of handcrafted items.

Any labour requirements under the project, including subproject activities, will therefore seek to source labour requirements locally. Should outside labour sourcing be necessary the subproject screening procedure will capture the level of influx to assess related risks.

Economic Profile

Zambia is endowed with a large land resource base of 42 million hectares of which only 1.5 million hectares is cultivated every year. Most of the livelihoods in the ZIFLP Project area are in agriculture and related activities. Primary agriculture contributes about 35 percent to the country's total non-traditional exports (all the country's exports other than copper and cobalt) and about 10 percent of the total export

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earnings for the country. The sector also provides employment to 70 percent of the labour force. The main subsistence crops in Eastern Province include maize, cotton, and groundnuts - harvested crops in the Province make up 64 percent of total household income. Off-farm income account for 21.9 percent, fruit and vegetable production 10.5 percent and livestock sales 2.5 percent (Tembo & Sitko, 2013).

Rural households diversify income sources to manage risks, secure a smooth flow of income, allocate surplus labour, respond to various kinds of market failures, and apply coping strategies. However, a 2009 study focusing on Eastern Province, tracking household coping strategies in 1985/86 compared to 2003, found that diversification income was, in most cases, a coping strategy rather than a voluntary choice (Karttunen, 2009).

Poverty in rural Zambia in 2015 affects an estimated 78 percent of smallholder households. In Eastern Province 75 percent of the population live on less than \$1.25 a day, and roughly 60% of the population is classified as living in extreme poverty (Tembo & Sitko, 2013). Female-headed households (84.7 percent) are more likely to live in poverty than male-headed households (75.5 percent). The majority of small and medium farm households are headed by men while 26 percent is headed by women and livelihoods amongst the rural population is mainly land dependent. Average size of a smallholder farm is 3.6 ha, of which 2.1 ha is cultivated land (IAPRI, 2016). In Eastern Province the average household landholding is 2.54 ha, with 1.86 ha under cultivation (USAID, 2016).

Rural farming families typically grow a variety of crops such as maize, sweet potato, groundnuts, soybeans, mixed-legumes, sunflower, seed cotton and tobacco. Cotton, tobacco and maize are the major cash crops. Agricultural productivity on existing agricultural lands is very low and estimated at only 2 tons/ha/year compared with the national average of 2.4 tons/ha/year (Sitko et al., 2011, Tembo and Sitko, 2013). But yields can vary dramatically depending on availability on input for smallholder farmers – on average, maize yields is 1,000 kg/ha higher on fields where fertilizer were applied than those without. Reflecting the lower access to inputs in female-headed households, yields are consistently lower and the main reason for not utilizing fertilizers is due to lack of funds (76.3 percent - IAPRI, 2016). Other causes are nutrient depletion on existing croplands as a result of poor farming methods such as burning crop residues; reduced input subsidies; smallholder farmers being unable to afford the high price of chemical fertilizer; and limited high quality seeds that are needed to produce high crop yields. Due to low productivity on existing croplands, farmers are encouraged to open up new land by clearing forests.

27.3 percent of all rural agricultural household livelihoods are as subsistence farmers and do not sell any crops. An additional 9.3 percent are near subsistence, selling less than 10% of their crops. 12.4 percent sell 10-25 percent of crops, 20.9 percent sell 25-50 percent and 19.8 percent sell 50-75 percent of their crops. 10.3 percent sell 75 percent or more. Households with larger landholdings are more likely to have a higher level of commercialization. On average, female-headed households are less commercialized than their male-headed counterparts. And while rural households commonly sell maize, 50 percent of all maize sales are done by less than 5% of

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landholders. Additionally, 38.7 percent of rural agricultural households are net purchasers of maize whether they grow the crop or not (IAPRI, 2016).

The most common livestock held by rural agricultural smallholder households in Zambia is chicken (80 percent), followed by goats (35.1 percent), cattle (31.1 percent) and pigs (16.3 percent). On average, households owning chickens own 13 birds. Cattle owning households on average own 8 heads. Goat owning households on average own 7 animals and pig owning households on average own 5 pigs. Male-headed households are more likely to own livestock than female-headed households (IAPRI, 2016).

Forests are very important for rural livelihoods in the Project area as forest goods and services provide food, medicine, shelter, fuel and cash income for the rural population. A study of rural livelihoods with over 4,000 respondents in Eastern Province found that 84 percent depend on the forest for consumption, and 19 percent depend on the forest for income (USAID, 2016). Forest-based activities such as carpentry, beekeeping and timber and rattan sales provide more than 50 percent of the average household income in some parts of the province. Mushrooms, fruits, leafy vegetables, tubers and insects collected from the province's miombo woodlands are widely consumed by rural households and enrich their starch-based diets with important vitamins and minerals. These foods are often available at the start of the rainy season and thereby serve as an important source of nutrition when food stocks are low. Most forest product harvesting and sale is seasonal, providing cash income at different times of the year. However, the province's increasing deforestation rates pose threats to the forest economy (World Bank, 2016a). However, female-headed households are less than half as likely as male-headed households to collect forest products for income, but poverty status does not impact forest utilization (USAID, 2016)

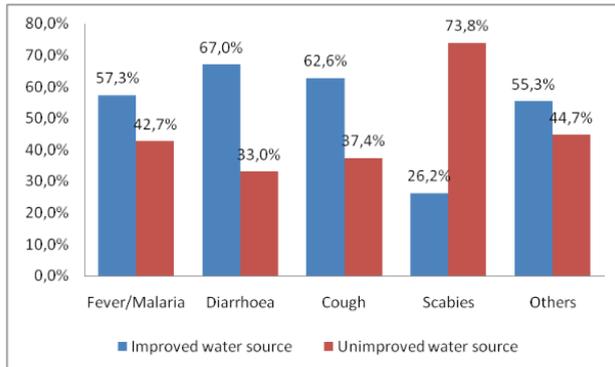
The Project area contains large parts of the globally biodiversity significant Luangwa Valley, and supports one of Zambia's highest revenue generating parks (South Luangwa National Park). The wildlife sector in Eastern Province provides substantial income to the Eastern Province mainly from tourism and hunting activities. A recent study conducted by The Nature Conservancy (TNC) valued the South Luangwa Park's tourism activity at \$20M per year. However, the gains from tourism almost entirely go to private lodge owners and thus do little to alleviate the poverty in nearby communities. Increases in food insecurity and high poverty levels have driven increased poaching of wildlife for bush meat consumption and illegal wildlife trade. Deforestation from fuel wood harvesting and smallholder agriculture expansion have also reduced the suitable habitat area for effective wildlife management. Human encroachment is extending toward national parks from major roads as fast as 2 km/year. This is threatening protected buffer zones, decreasing wildlife connectivity, eliminating viable TFCAs and driving accelerated deforestation and associated GHG emissions (World Bank, 2016a).

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Energy and Water

The majority of households live without electricity or public water or sanitation services. There is a strong correlation between access to improved water and health status.

Figure 4: Diseases by Water Source



VAC, 2015

Wood is the most common source of fuel in rural areas, 97 percent in a rural survey reported using wood, while two percent use charcoal. The same survey found that 31 percent made use of solar energy for lighting and charging of cell phones, but women were less likely to have access to solar energy (USAID, 2016).

In terms of contribution to direct cash income for rural communities, fuel wood is the most important forest product obtained from the forests, followed by Non-Wood Forest Products (NWFPs) such as wild meat, honey, mushroom and caterpillars. This is due to the fact that it is fairly easy to enter into the fuel wood business for short-term income or as a long-term income generating activity because most fuel wood producers (both firewood and charcoal) operate without any license, especially those who sell fuel wood that is harvested when clearing land for agriculture, and if required a license can be obtained at short notice from the FD district offices (Gumbo et al., 2013). However, most charcoal producers opt not to get one, therefore, produce charcoal illegally.

Generally, there are relatively minimal entry barriers into the fuel wood business. In addition, the business of producing and selling charcoal itself requires minimal monetary and technical inputs. Therefore, producers are often opportunistic, and begin to produce when extra cash is needed, or when no alternate employment opportunities exist. Migrant or landless families are also responsible for significant charcoal production, as it is considered as an easy-to-get income activity. Whilst this may be beneficial in terms of providing a quick poverty mitigation solution, it means a large population is involved in unregulated extraction of wood from the forests, thus, driving forest degradation.

Gender

The ZIFLP recognizes that livelihoods in the Eastern Province of Zambia are largely based on natural resources, primarily through agricultural activities. However, in Zambia, 80 percent of female-headed households own less than 2ha of land, and 48.5

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percent own less than 1ha. In terms of male-headed households the corresponding numbers are 61 and 27.1 percent, respectively. Women provide more than 60 percent of the agricultural labour force, but do not have the same access to productive inputs (e.g. land, finance, and information), which makes women more vulnerable to the negative impacts of climate variability and related shocks. For example, female-headed households in Eastern Province are less likely to: access innovation; and adopt improved technologies in agriculture such as ploughing, ripping, and fertilizer or herbicide use. In addition 43 percent of male-headed households engage in crop commercialization whilst only 29 of female-headed households are able to progress beyond subsistence farming.

ZILF-P activities may induce shifts in the labour-based gender roles at community level. For instance, the adoption of conservation agriculture practices will potentially shift the labour input from ploughing, which is traditional a male activity to ripping, which increases land preparation and is traditionally seen as female work (Midgley et al, 2012). However, where ripping is done with oxen, it may rely on male labour input. Climate-smart agriculture practices may also require substantial investments of time, labour or cash, which often are considerable constraints for women.

Despite the harmonization of customary and statutory land laws, women do not have equal voice and power on a national, local or household level. For instance, in Eastern Province, women are less likely to engage in landscape management, including forest meetings, forest management groups or village forest leadership (USAID, 2016).

ZIFLP will seek to address inequities in human capital, economic empowerment and voice through the design and targeting of the proposed activities. However, existing literature and data is limited with regard to women and men's roles in the proposed activities. In order to adequately understand the gender impacts of project activities, all data collected under the project will be disaggregated by sex, including as part of the project baseline. For households, information should clarify the gender of the head of the household (IAPRI, 2016). In addition, ZIFLP will select the most relevant indicators to measure changes in outcomes between men and women, the preliminary indicators are given below.

Access to markets and extension (economic empowerment and improving human capital)

- Number and percentage of women and men who access employment or increase their incomes due to project activities;
- Changes in women's workload compared with men's due to environmental changes and adaptation activities;
- Number and percentage of training sessions targeted at women and men, by content area;
- Number of people reached with assets and/or services from ISFL programs (% women);
- Land users who have adopted sustainable land management practices (% women) as a result of ISFL support; and
- Land users who have received training for improving land management,

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including agricultural productivity (% women).

Women's participation in community groups (voice & rights)

- Evidence that climate change policies, strategies, and plans require the participation and involvement of poor women and men in developing and managing local adaptation and mitigation plans; and
- Number and percentage of women and men who attend community-based meetings on natural resource management.

Vulnerability in Eastern Province

The composition of households, relative poverty status, household assets, dependence on natural resources and relative size of landholdings suggest high level of vulnerabilities of households, in particularly in rural areas of Eastern Province. The baseline for the project will significantly expand the understanding of vulnerabilities in the six districts under the project. The project screening will consider distributional impacts relevant in the subproject area. These include ability to participate in project activities, gendered nature of resource use and access, socio-economic change that may arise as a result of project interventions, distribution of benefits and relative inclusion of vulnerable groups, including:

- Female-headed households;
- Landless and land-poor households;
- Household without livestock and without labour;
- Otherwise marginalized households such as households supporting or headed by children, the elderly, HIV/AIDS, terminally ill or the disabled.

Land Tenure

Land ownership by smallholders is typically either allocated by traditional leaders or through inheritance. Only 5.7 percent of smallholder fields were purchased. This is reflected in the fact that a similar proportion (6 percent) reports having a chiefs' certificate of landholders in while close to 90 percent have customary ownership without titles. Those who hold title to their land on average own larger land-holdings (IAPRI, 2016).

The lack of clear land tenure is a major underlying driver of agriculture expansion into forest land. According to the Integrated Land Use Assessment (ILUA) survey, forest ownership in Zambia is divided amongst the following entities: customary authorities, i.e., forests on communal land or "customary forests" – about 63% of total forestlands in the country; state, i.e., forests on state land or "state forests" – about 24%; private land, i.e., "private forests" – about 10%; and the rest (3%) has undefined/ unknown ownership (Mukosha and Siampale, 2008).

A large proportion of land in the Eastern Province is under customary land tenure. However, the exercising of tenure rights over forest is very weak because there is limited: understanding of the forest tenure; and capacity to manage the forests

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“owned”. The chiefs/chieftainesses of the various chiefdoms exercise some authority over customary forests, but their power mainly lies in the control of land resources and the ability to allocate it to different users. Hence, land allocation and land use processes on customary lands are often based on local governance processes. For instance, obtaining permission to settle and use land within a chiefdom has to be negotiated with the chiefs/chieftainesses, who usually dictate the rights, responsibilities and use for the land users. However, the traditional authority of the chiefs/chieftainess is weakening due to a breakdown of traditional cultural values. Consequently, their ability to properly manage areas under their control is declining. Conflicts over land resources and heir-ship claims complicate this issue.

The lack of recognition of forest tenure and capacity to exercise the tenure rights is contributing to the acceleration of forest destruction. This is due to the fact that customary forests are perceived as open-access forest resources and that some rural inhabitants do not benefit much from the forests, hence, the lack of incentive to sustainably use the forest resources (Gumbo et al., 2013). In other cases, the exercising of tenure and ownership rights directly causes deforestation. For instance, some farmers clear the land for agriculture in order to lay due claim to it. Community members normally acquire land for cultivation and settlement by requesting it from the traditional leaders, i.e., chiefs/ chieftainesses and their advisors. However, if a community member is allocated a piece of land and does not clear the forests on it to show that he/ she is actively using it, the authorities may withdraw it and give it to someone else.

Land Use

While there’s a perception in Zambia that land is abundant, 56.7 percent of farmers report that there is no land available to them in the vicinity to expand their production. The highest percentage reporting no additional land availability was in Eastern and Southern Provinces. In Eastern Province, households have access to an average 0.5ha of virgin land, 1.3ha less than the national average. Household members in the province, on average, travel 2km from their homes to their nearest field. However, the Province has fewer households who farm less than 1 ha as compared to the national average, but relative more households farming 1-5 ha. 6.1 percent of rural households in the Province farm less than 0.5 ha, 14.6 percent own 0.5-1 ha, 38.2 percent own 1-2 ha, 37.2 percent farm 2-5 ha and 3.9 percent farm more than 5 ha (IAPRI, 2016).

Another underlying driver of agriculture expansion into forest land is the lack of land use planning as there are no proper processes for the allocation of land for different uses at various jurisdictional levels. In addition, there are no enforcement provisions for dealing with illegal allocations. This leads to inconsistencies in managing land use activities within districts and chiefdoms. As a result, forests are easily converted to agricultural land use including through government channels, especially when they are degrading or degraded.

Customary forests often do not have management plans or guidelines. This also applies to the Forest Reserves that are managed by the District FD officers. Therefore, forests are generally very vulnerable to encroachment for agriculture and charcoal

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burning as there is no planning or any structured management processes. However, an exception to this is that some communities in the Project area have received external support from the non-profit company Community Markets for Conservation (COMACO), and conservation management plans have been developed for Community Conservation Areas (CCAs) in a number of chiefdoms including Chikomeni, Chikuwe, Jumbe, Luembe, Magodi, Mwasemphangwe, Mwape, Nyamphande, and Zumwanda.

The ZIFLP sub-component 2.2. and 2.3 support community approaches and collaborative management control over natural resources, an approach, which has been found to enhance outcomes and boost productivity. However, this shift in control should be monitored to ensure that efforts are not captured by existing agencies or elites, a process that could undermine the potential benefits for local livelihoods.

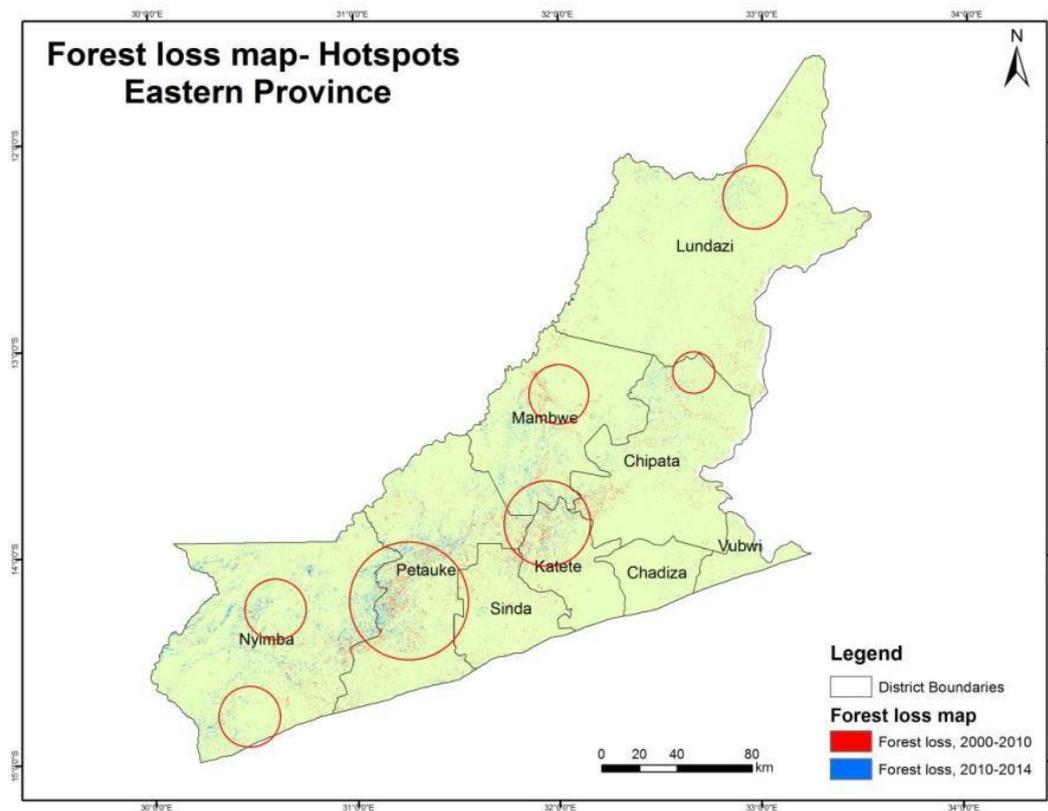
Resource Use

Forest landscapes and products in the Project area play crucial roles in enhancing human well being and sustaining the economy of the region (MNDP, 2016). There is a high level of domestic dependency on forest products for day-to-day subsistence, including fuel, shelter, food, pasture, fodder, medicines and household utility items. In addition, forests serve as sources of goods, employment and business opportunities (e.g. timber and trading in non-wood forest products such as honey, mushrooms, caterpillars and fruits). Forests also provide safety-nets, in times when households are faced with stress and shocks, by the provision of: cheap utility products that replace expensive commodities for home use; and, opportunistic harvesting opportunities and sale of surplus forest produce to raise cash income, as a coping strategies.

Drivers of Deforestation

The key drivers of deforestation and forest degradation in the Eastern Province are agricultural field expansion, wood extraction (primarily for charcoal production, fuel wood and construction), and uncontrolled forest fires. The province is estimated to have lost 0.9% of forest cover annually between 2010 and 2014, compared to 0.5% in the period 2000 and 2010 (UNIQUE, 2016a). Figure 4 shows the districts that have experienced the highest rates of deforestation.

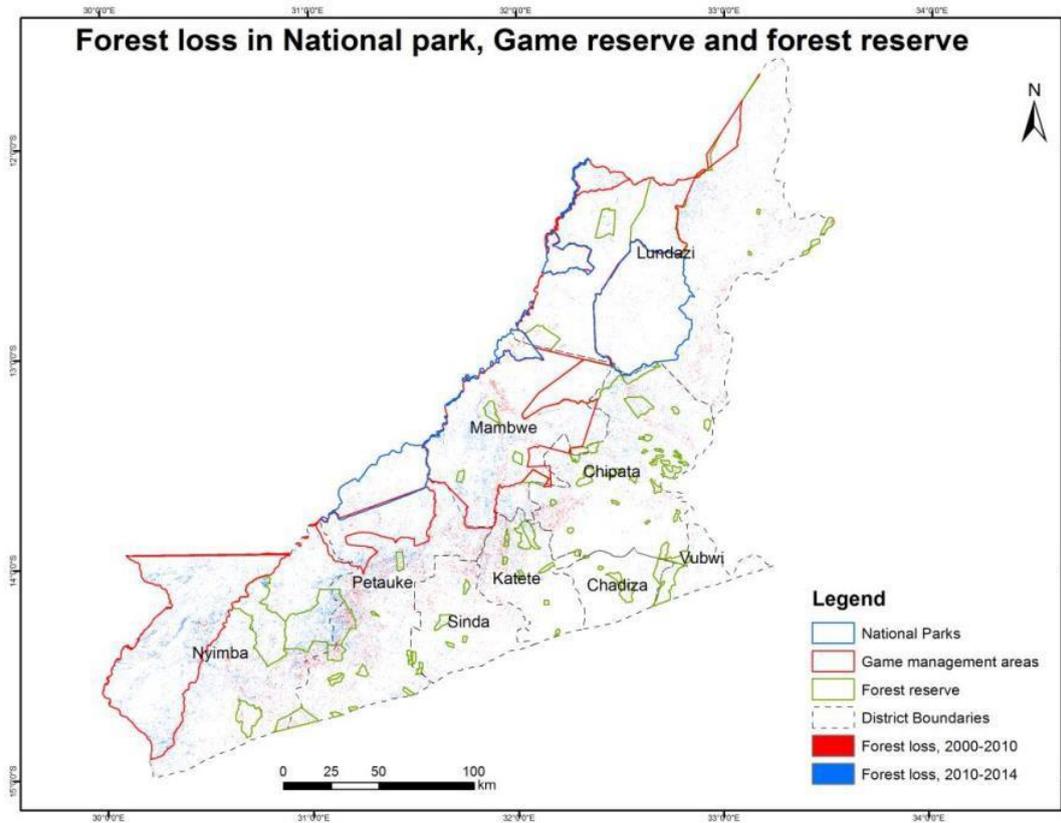
Figure 5: Deforestation Areas in Eastern Province



Source: *Drivers of Deforestation and Forest Degradation in Eastern Province, Zambia, UNIQUE, 2016*

The protected areas have also been affected by deforestation and Figure 5 shows the forest loss in national parks, game reserves and forest reserves.

Figure 6: Forest Loss in Protected Areas



Source: *Drivers of Deforestation and Forest Degradation in Eastern Province, Zambia, UNIQUE, 2016*

3.6 ARCHAEOLOGY AND CULTURAL HERITAGE

The proposed ZIFLP encompasses the Luangwa floodplains, which have a number of historical hot springs within the Luangwa Valley. One occurs at the saltpan in the Nsefu sector of the Luangwa South NP. The streams are surrounded by saline deposits, which were valued by the local people in the past. The Project area also has many graveyards as it is typical for each village community to have its own graveyard. In addition, the Lukusuzi NP is reported to have rock paintings and caves that date back to the late Stone Age (Mbewe, 2016).

Cultural property includes monuments, structures, works of art, or sites of significant points of view, and are defined as sites and structures having archaeological, historical, architectural, or religious significance, and natural sites with cultural values. This includes cemeteries, graveyards and graves. The negative subproject attributes, which will make a subproject ineligible for support includes any activity that will adversely impact cultural property.

The Project-supported civil works could impact sites of social, sacred, religious, or heritage value. "Chance finds" procedures would apply when these sites are identified during the construction period. In the event of finding of properties of cultural value during construction, the following procedures for identification,

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protection from theft, and treatment of discovered artefacts should be followed:

- Stop the construction activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects.
- Notify the Supervising Engineer who in turn will notify the responsible authorities;
- The National Heritage Conservation Commission, in collaboration with the relevant local authority, will be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures.
- Decisions on how to handle the finding will be taken by the National Heritage Conservation Commission and other responsible authorities. This will include changes in the layout (such as when finding an irremovable remain of cultural or archaeological importance), conservation, restoration and salvage.
- Implementation of the authority decision concerning the management of the finding will be communicated in writing by the National Heritage Conservation Commission;
- Construction work will only resume after permission is given by the National Heritage Conservation Commission and other responsible authorities concerned with safeguarding the cultural property.

These procedures will be included in standard bidding documents for construction contracts. During project supervision, the Supervising Engineer will monitor compliance with these procedures, which relate to the treatment of any chance finds encountered. Relevant findings will be recorded in World Bank Supervision Reports and Implementation Completion Reports will assess the overall effectiveness of the project's cultural property mitigation, management, and activities, as appropriate.

3.7 KEY ISSUES FROM STAKEHOLDER CONSULTATIONS

This section of the baseline summarizes the key issue from the stakeholder consultations that are given in Annex 1, and the relevant issues have been incorporated in the various aspect of this ESMF.

The main issues arising from the stakeholder discussions are as follows:

- Lack of capacity in most government institutions;
- Livelihood enhancement activities such as agroforestry, bee-keeping and the development of markets for non-timber forest products such as fruits, mushrooms and bamboos are key to preventing the cutting down of trees and wildlife depletion activities such as poaching;
- Support to extension services and the fostering of a participatory extension approach are key to ensuring that the communities benefit from extension services;
- Good crop storage facilities are critical for productivity improvement;
- Lack of use of personal protective equipment during the implementation of climate-smart and conservation activities;
- The support of local chiefs is paramount in ensuring the success of

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- conservation activities as they have jurisdiction over customary land and are reported to also be involved in illegal sale of customary land;
- Conservation farming activities being encouraged in the Project area include crop rotation, minimum tillage, manure application, retention of crop residues, agroforestry (using *Gliricidia sepium*) and fire management;
 - Communities need to be empowered with value addition to their products;
 - Establishing woodlots using the fast growing species *Gliricidia sepium* is being widely used for woodlot establishment;
 - Community sensitization and awareness is very important in ensuring that rural communities remain committed to conservation efforts;
 - Small scale poultry, vegetable gardening and bee-keeping are important livelihood activities for women in the Project area;
 - Energy efficient technologies being used and promoted in the Project area include bio-digesters and rocket cook stoves;
 - The Project area has community graveyards, rock painting, caves and iron smelting artefacts of the late stone age, which will need to be managed in accordance with the National Heritage Conservation Commission guideline, should they be disturbed;
 - Despite the restrictions embedded in the Forests Act of 2015, people are residing and conducting farming activities in National Forest Reserves. The Lundazi Forest Reserve has been encroached with large human settlements and the communities have also opened up small scale farms for a variety of crops, causing a serious depletion on natural resources;
 - BCP is implementing REDD+ activities under the Community Forests Project (CFP) in the Lumimba GMA, specifically in Mwanya Chiefdom adjacent to the Lukusuzi national park, the South Luangwa National Park and Luambe National Park to the north. The organization is currently supporting the communities in the area to form community forest management groups;
 - The COMACO Model - COMACO helps small-scale farmers become good stewards of their land and better neighbours to national protected areas by using market incentives and effective training methods to encourage the adoption of skills that protect soils and reduce threats to forests and wildlife habitat. COMACO currently operates across nearly a third of Zambia, encompassing the entire Luangwa Valley ecosystem and adjacent watersheds that feed into Bangweulu Swamp and the lower end of the Zambezi River. Through its growing capacity to leverage change in farming and land use practices, COMACO has reduced some of the key drivers of forest degradation, deforestation, wildlife poaching, and soil degradation. It has also initiated Africa's first project to capture multiple pools of carbon derived from REDD+, SALM (Sustainable Agriculture and Land Management), fuel-efficient cook stoves, and recycled bio-wastes into renewable energy;
 - Community participation in sustainable use and protection of wildlife resources is very minimal. The communities who reside on the borders of National Parks (NPs) are the ones who have direct impacts on the resources and consequently bear the positive and negative impacts arising from the protection/ lack of protection of the NPs. These communities, therefore, need to fully participate in resource protection. Two Community Resource Boards

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(CRBs), Chitungulu and Mwanza, currently exist on the western side of the Lukusuzi NP. However, on the eastern side of the park, the two CRBs that were established in Mwansempangwe and Chikomani, as forums under which communities could participate in resources protection, no longer exist and the number of volunteer scouts recruited under these CRBs has substantially reduced due to absence of physical benefits and legal support. Consequently, the Mwansempangwe area is currently an entry point for illegal activities, such as poaching, mining and farming, in the park;

- The area between the South and North Lwangwa, Luambe, Lukusuzi and Kasungu National Parks provides an important ecological connectivity. Increased human activity in the area would reduce the effectiveness of this area to provide the needed connectivity and can cause an end to the movement of animals through this landscape; and
- Resource management in the Lukusuzi NP is constrained by a number of factors including the lack of a sufficient budget allocation from the government to effectively support operations and management activities such as law enforcement operations, research activities, transport, capacity building activities, conservation awareness raising, communication, and infrastructure maintenance. As a result poaching and human-wildlife-conflicts are common. Human encroachment has also been a major problem in the park.

4. WORLD BANK ENVIRONMENTAL AND SOCIAL SAFEGUARD POLICIES AND ZAMBIAN ENVIRONMENTAL LEGISLATION

This chapter reviews safeguard policies of the World Bank and Zambian policies and legislation relevant to environmental and social safeguards.

4.1 WORLD BANK SAFEGUARD POLICIES

As a key financing institution, the WB is committed to supporting development projects in a manner that protects people from any form of adverse impacts while ensuring that there is little environmental damage both in the short and long term. In order to minimize and manage environmental and social impacts, the Bank's Operational Policies (OPs) and Bank Procedures (BPs) have to be complied with as part of due diligence.

The WB safeguards policies require integrating environmental and social impacts and risks into the planning and implementation of financed projects such as the ZIFLP. In the context of the proposed ZIFLP, six (6) of the ten (10) safeguard policies have been triggered. Table 2 shows the applicability of the WB Safeguard Policies to the ZIFLP.

It is important to note that all World Bank Safeguard Policies apply all the time to the ZIFL Project. However, Table 2 below presents the Bank policies considered most important and applicable to the ZIFL project at this time. Additionally, ZIFLP will adhere to the World Bank Group Environmental, Health and Safety Standards as presented at www.ifc.org/ehsguidelines. Likewise, all WB EHS Guidelines apply all the time but the most relevant guidelines for this Project include the General Guidelines (which contain environmental, construction, occupational and community health and safety guidance relevant to small works and building refurbishment), Annual and Perennial Crop Production, Livestock Production, Forest Harvesting Operations, Sawmilling and Wood-based Products, Board and Particle-based Products and Poultry Production. The EHS Dairy and Poultry Processing or Pulp and Paper Processing guidelines may also be applicable depending on which subproject activities are selected.

Since the project finances harvesting activities conducted by local communities under community or even possibly joint forest management, such communities will adhere to a time-bound phased action plan to achieved a standard of forest management developed with the meaningful participation of locally affected communities, consistent with the principles and criteria of responsible forest management including the following as outlined in paragraph 10 of OP 4.36:

- a) compliance with relevant laws;
- b) recognition of and respect for any legally documented or customary land tenure and use rights as well as the rights of indigenous peoples and workers;
- c) measures to maintain or enhance sound and effective community relations;
- d) conservation of biological diversity and ecological functions;
- e) measures to maintain or enhance environmentally sound multiple benefits accruing from the forest;

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- f) prevention or minimization of the adverse environmental impacts from forest use;
- g) effective forest management planning;
- h) active monitoring and assessment of relevant forest management areas; and
- i) the maintenance of critical forest areas and other critical natural habitats affected by the activity.

In addition to the above requirements, the forest certification systems will be independent, cost-effective, and based on objective and measurable performance standards that are defined at the national level and are compatible with internationally accepted principles and criteria of sustainable forest management. The system will use independent, third-party assessment of forest management performance. In addition, the system's standards will be developed with the meaningful participation of local people and communities; indigenous peoples; non-governmental organizations representing consumer, producer, and conservation interests; and other members of civil society, including the private sector. The decision-making procedures of the certification system will be fair, transparent, independent, and designed to avoid conflicts of interest. The action plans will be developed prior to commencement of any community driven forest activities will take place. The action plans require meaningful participation of locally-affected communities and will be acceptable to the Bank.

It is possible that the project may work with private sector operators in the forestry sector. If any commercial harvesting of forest activities are supported, the GRZ will make the results of all forest management assessments carried out under any independent forest certification system available to the public in accordance with the Forestry OP/BP 4.36. The project would only finance commercial harvesting operations if the applicable subproject environmental assessment or other relevant information source demonstrates that the areas affected by the harvesting are not critical forests or related critical natural habitats. Any industrial-scale commercial harvesting operations would also a) be certified under an independent forest certification system acceptable to the Bank as meeting standards of responsible forest management and use; or b) where a pre-assessment under such an independent forest certification system determines that the operation does not yet meet the requirements of subparagraph 9(a), adhere to a time-bound phased action plan acceptable to the Bank for achieving certification to such standards. The forest certification system will meet the same standards outlined in paragraph 10 of OP 4.36 as already described above for local community based enterprises, but such standards will be more stringent.

The Project will abide by the World Bank Group Environmental, Health and Safety (EHS) Guidelines for Construction, Forest Harvesting Operations, Sawmilling and Wood-based Products, Board and Particle-based Products as necessary and appropriate and will impose environmental obligations on contractors providing any works and/or services in forests and natural habitats. The environmental obligations include restrictions on activities such as hunting, building fires (except for planned prescribed burns) and the like in forests and natural habitats. This ESMF contains sample language to this effect which can become part of bidding documents and contracts contained in Annex 8.

Table 2: World Bank Safeguard Policies

| SAFEGUARD POLICY | TRIGGERED | EXPLANATION |
|-------------------------------------|-----------|--|
| Environmental Assessment OP/BP 4.01 | Yes | <p>The Bank safeguards policy on Environmental Assessment is triggered as this is an integrated forest landscape project that will involve afforestation, reforestation, promotion of sustainable conservation farming methods as well as preservation of wildlife habitat in national parks and adjacent GMAs and the maintenance of wildlife. It will have physical consequences on the ground, which must be assessed and managed. The Project's goal to improve landscape management and increase the flow of benefits for targeted rural communities in the Eastern Province is overwhelmingly positive but its impacts must be assessed and managed.</p> <p>The positive impacts of the project will be: a reduction in greenhouse gas emissions with improved forest cover, rural livelihood improvement, and wildlife conservation. The potential negative environmental impacts will be known with more specificity as project activities and areas of influence are identified during project preparation but are expected to be limited, localized, small-scale and not significant given that many of the on the ground Project activities will be from community driven development initiatives. An Environmental and Social Management Framework (ESMF) has been prepared to assess and guide the screening and mitigation of any negative impacts of the project. The Project will monitor for possible cumulative negative impacts and take action as necessary.</p> |
| Natural Habitats OP/BP 4.04 | Yes | <p>The Bank's safeguards policy on Natural Habitats is triggered given the potential impacts on natural habitats either directly or indirectly, through REDD+ activities, conservation farming, and the management of wildlife habitats. The expected impact on habitats is positive. Changes in livelihoods of rural farmers, due to increased agriculture activities and the introduction of new agricultural technologies, are likely to have limited negative impacts on natural habitats.</p> |
| Forests OP/BP 4.36 | Yes | <p>The Bank's safeguards policy on Forests is triggered as the Project will have both positive and negative impacts on the forest cover and resources in the area. The positive impacts associated with the Project are the preservation and restoration of forest resources, the establishment of new plantations, and a reduction in charcoal production with the availability of alternative energies. The negative impacts associated with the Project are envisaged to be the intrusion of smallholder agroforestry, which may have an effect on the indigenous forests. The proposed mitigation measures for these impacts are included in section 5.</p> |
| Pest Management OP 4.09 | Yes | <p>The Bank's safeguards policy on Pest Management is triggered as increased agriculture activities and the adoption of new climate smart agriculture technologies could result in increased usage of agrochemicals by farmer beneficiaries. The Project supports supplies and equipment</p> |

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| SAFEGUARD POLICY | TRIGGERED | EXPLANATION |
|--|-----------|---|
| | | for nurseries which may include pesticides as part of an Integrated Pest Management (IPM) approach. . While a stand-alone Pest Management Plan (PMP) is not required for this Project, the ESMF contains measures to avoid usage of restricted pesticides, promote use of personal protective equipment (PPE), training of producers in proper handling of agrochemicals and promote IPM. |
| Physical Cultural Resources OP/BP 4.11 | Yes | The policy on Physical Cultures Resources is triggered as a preventative measure in the event of potential impacts on the known and as of yet unknown cultural resources of the area. The ESMF contains measures for avoiding and managing impacts on known PCR in the project area as well as chance-finds procedures in case new resources are discovered in the course of the Project. |
| Indigenous Peoples OP/BP 4.10 | No | The policy is not triggered as the proposed Project activities in the Eastern Province of Zambia are in areas that do not include indigenous groupings as defined by the policy. |
| Involuntary Resettlement OP/BP 4.12 | Yes | <p>This policy is triggered given that some of the activities related to forest management, agricultural investments, or protected area investments may require resettlement. Also, In accordance with OP 4.12, a Process Framework (PF) has been prepared to avoid or minimize any adverse impacts upon local livelihoods and to support the development of alternative livelihoods as needed, on the lands already available to the affected households or communities. The project will support the preparation and implementation of follow-up action plans to provide livelihoods support where needed, following the criteria and procedures specified in the PF.</p> <p>Zambia has resettled communities who encroached the protected areas in the recent future. There could be possibilities of dealing with same encroachers in the life of this project. The PF outlines the process of dealing with such situations following the Zambian laws, the provisions of the PF in accordance with OP 4.12 as well as international best practices.</p> <p>A Resettlement Policy Framework and Process Framework has also been prepared in association with the ESMF given that the Project will support improved management of Lukusuzi NP and adjacent GMAs and protected areas.</p> |
| Safety of Dams OP/BP 4.37 | No | The policy on the Safety of Dams is not triggered as the Project will not involve the construction of water retention structures that are likely to pose potential hazards to human or animal health and safety. The Project will not fund any dams as defined in OP 4.37 requirements for small and large dams. |
| Projects on International Waterways OP/BP 7.50 | No | The policy for Projects on International Waterways is not triggered as the proposed activities will not potentially impact any country that shares the Luangwa watershed. The anticipated increase in water use and direct abstraction on water resources of the Luangwa watershed will be of low significance and of local impact only. |
| Projects in Disputed Areas OP/BP 7.60 | No | The Bank policy on Projects in Disputed Areas is not triggered by the Project, as it is not located in any disputed territory of the country. |

4.2 WORLD BANK CLASSIFICATION

All projects proposed for World Bank financing are screened for potential environmental and social impacts. Based on earlier World Bank review, the Bank has classified this overall ZIFLP as a category B “project”. While there are environmental and social safeguard issues associated with the proposed project, no large-scale, significant, or irreversible negative impacts are foreseen. In general, the project is expected to generate positive, environmentally friendly land management practices including climate-smart agriculture and implementation of national park management plans. However, the project takes place in and could conceivably negatively impact natural habitats, protected areas, and forests. Additionally, as a project with an agricultural component, there are safeguard issues related to pesticide use. In all these cases, activities are largely community and demand-driven, and potential impacts are small-scale and localized. There may be cumulative impacts from these small-scale activities, which will need monitoring.

A resettlement audit has been undertaken to understand the gaps from a recent resettlement exercise in Lukusuzi National Park by The Zambian Government. The main objective of the audit of the resettlement process, was to determine gaps in the process and propose actions to address them. Specifically, the review and audit sought to:

- To collect all relevant documentation of the process of resettlement as conducted by Zambia government and obtaining an overall understanding of the process of conducted to date;
- Seek views of the affected persons and determine their current status to assess the relative impact of their relocation;
- Assess the fairness of the process followed and the appropriateness of compensation provided, and identifying any key issues and potential gaps for consideration in the future processes, where the WB is involved; and
- Prepare an action plan to address the gaps, and ensure the project address the gaps.

The audit report contains an action plan and recommendation to address any gaps through on-going government projects (e.g. supported by GIZ and COMACO), as well as livelihood activities as part of ZIFLP implementation. The gaps identified include:

- Inadequate consultations with encroachers and the host communities;
- Lack of support to restore and enhance livelihoods.

Any resettlement carried out during the project will be subject to the project's Resettlement Policy Framework. The project may encounter encroachment in National Parks or Forests during the life of this project. Therefore, additionally, the Process Framework (PF) outlines the process of dealing with limiting access to resources, following Zambian laws and the provisions of the PF in accordance with OP 4.12, as well as international best practices.

The World Bank prescribes the use of an ESMF, RPF and PF when the “project” will

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include a multitude of subprojects when the environmental and social impacts cannot be determined until the subproject nature and location is better defined. The ESMF is used then to screen the specific subprojects, identify how any environmental and social impacts will be applied and then ensure there is a mechanism to monitor and report on these provisions.

4.3 ZAMBIAN POLICY FRAMEWORK

Various Zambian policies, plans and programs are applicable as listed below (and summarized in Annex 2) to the ZIFLP which define the priority issues for relevant government ministries. Zambia has over the past two decades developed a number of policies, plans and legislation to guide private and public institutions to pursue environmentally and socially sustainable development in various sectors of the economy. Environmental and social issues are crosscutting and this is reflected in the various legislative frameworks, policies and legal structures that are in place.

- Vision 2030;
- Revised Sixth National Development Plan;
- Environmental Policy;
- National Parks and Wildlife Policy;
- Agriculture Policy;
- Forestry Policy;
- Energy Policy;
- National Strategy to Reduce Deforestation and Forest Degradation (REDD+ Strategy);
- National Policy on Climate Change 2016;
- National Climate Change Response Strategy;
- National Adaptation Program of Action;
- National Biodiversity Strategy and Action Plan;
- National Resettlement Policy; and
- Decentralization Policy.

4.4 ZAMBIAN LEGAL FRAMEWORK

The applicable Zambian legislation is listed below (and summarized in Annex 3). The most relevant laws are also highlighted in this section. Those Acts addressing land issues are detailed in the Annex and discussed more fully in the RPF and PF.

- Constitution of Zambia Cap 1;
- Environmental Management Act of 2011;
- Forests Act of 2015;
- Zambia Wildlife Act of 2015;
- Agricultural Lands Act Cap 187 of 2006;
- Water Resources Management Act of 2011;
- National Heritage Conservation Commission Act, Cap 173 of 1989;
- Lands Act Cap 184;
- Lands Acquisition Act Cap 189;
- Local Government Act, Cap 281;

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- Urban and Regional Planning Act of 2015;
- Arbitration Act No. 19 of 2000;
- Land Survey Act Cap 188; and
- Valuation Surveyors Act Cap 207.

Environmental Management Act of 2011

Enacted in April 2011, The Environmental Management Act (EMA) No. 12 of 2011 replaced the Environmental Protection and Pollution Control Act (EPPCA) which until then was the supreme environmental law in Zambia. Under this act, the Environmental Council of Zambia (ECZ) was re-named as the Zambia Environmental Management Agency (ZEMA).

The Environmental Management Act provides the legal basis for the protection and management of the environment, conservation and sustainable utilization of the natural resources in Zambia. The EMA makes provisions for integrated environmental management including the environmental impact assessment (EIA) of projects prior to implementation, strategic environmental assessment, declaration of an area of land that is ecologically fragile or sensitive to be an environmentally protected area, and the conservation of biological diversity and the fair and equitable sharing of the benefits arising out of the utilization of biological resources.

Forests Act of 2015

The Forests Act establish the Forest Development Fund and provides for the:

- Establishment and declaration of National Forests, Local Forests, joint forest management areas, botanical reserves, private forests and community forests; Participation of local communities, local authorities, traditional institutions, non-governmental organizations and other stakeholders in sustainable forest management;
- Conservation and use of forests and trees for the sustainable management of forests ecosystems and biological diversity; and
- Implementation of the United Nations Framework Convention on Climate Change, Convention on International Trade in Endangered Species of Wild Flora and Fauna, the Convention on Wetlands of International Importance, especially as Water Fowl Habitat, the Convention on Biological Diversity, the Convention to Combat Desertification in those Countries experiencing Serious Drought and/or Desertification, particularly in Africa and any other relevant international agreement to which Zambia is a party.

In terms of community forest management, the Act provides for the formation of a CFMG for the purpose of communal control, use and management of a forest. Consent from the area chief is required and the group can consist of a group of persons who are: members of a village in or near a forest; managing a forest or part of a forest; or desirous of managing a forest or part of a forest.

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The CFMG can enter into a community forestry agreement with the Forestry Department in respect of an area or forest for which the community forest management group is formed. Where a community resource board is already in existence, the group can also enter into a community forestry agreement with the department. A CFMG can, with the approval of the Director, enter into partnerships with other persons for the purposes of ensuring the efficient and sustainable conservation and management of the community forest.

In terms of user rights, a community forestry agreement may confer on a community forest management group the following forest user rights in the community forest concerned: (a) collection of medicinal herbs; (b) harvesting of honey; (c) harvesting of timber or fuel wood; (d) grass harvesting and grazing of animals; (e) collection of forest produce for community based industries; (f) eco-tourism and recreational activities; (g) scientific and educational activities; (h) plantation establishment through non-resident cultivation; and (i) the right to enter into contracts to assist in carrying out specified silvicultural operations.

Zambia Wildlife Act of 2015

The Wildlife Act provides enabling legislation for the sustainable management of wildlife in Zambia. In addition, the Act establishes the Department of National Parks and Wildlife and provides for the winding up of the operations of the Zambia Wildlife Authority. The functions of the Wildlife Management Licensing Committee are defined, in addition to providing for: the establishment, control and management of National Parks, bird and wildlife sanctuaries; the conservation and enhancement of wildlife eco-systems, biological diversity and objects of aesthetic, pre-historic, historical, geological, archaeological and scientific interest in National Parks.

In terms of community partnerships, the Act provides for: the registration of community resources boards; the promotion of opportunities for the equitable and sustainable use of the special qualities of public wildlife estates; the establishment, control and co-management of Community Partnership Parks for the conservation and restoration of ecological structures for non-consumptive forms of recreation and environmental education; the sustainable use of wildlife and the effective management of the wildlife habitat in Game Management Areas; the development and implementation of management plans; and enhancement of the benefits of Game Management Areas to local communities and wildlife through the involvement of local communities in the management of Game Management Areas;

The Act includes provisions for the regulation of the keeping, ranching, harvesting, hunting, and import and export of animals (including birdlife) and their products. It also covers the legal requirements for the control of illegal hunting or collection of wildlife during the construction process.

In addition, the Act provides for the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Convention on Wetlands of International Importance especially as Waterfowl Habitat, the Convention on Biological Diversity, the Lusaka Agreement on Cooperative

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Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora.

In addition, where it is deemed that Community Resource Boards need to be formed to allow communities to effectively participate in resource protection and champion conservation awareness campaigns in the communal areas e.g. in the Chikomeni and Mwasemphangwe areas, these could also be formed through the provisions of this Act.

National Heritage Conservation Commission Act, Cap 173 of 1989

Under the Act, any project being implemented is required to disclose any new archaeological, paleontological, or cultural sites it encounters to the National Heritage Conservation Commission (NHCC) and to follow their procedures for the investigation and/or removal of material from them prior to continuing construction activities. Any Project-supported activities that could impact sites of social, sacred, religious, or heritage value are to be reported to the Commission prior to the activities being carried out.

4.5 INTERNATIONAL AGREEMENTS

Zambia is a signatory to a number of international environmental conventions that are applicable to this Project, and these are listed below and discussed in Annex 4:

- Convention on International Trade in Endangered Species of Wild Fauna and Flora;
- Convention on Biological Diversity;
- United Nations Framework Convention on Climate Change;
- Kyoto Protocol to the United Nations (Framework Convention on Climate Change);
- United Nations Convention to Combat Desertification;
- Ramsar Convention;
- African Convention on the Conservation of Nature and Natural Resources;
- Convention Concerning the Protection of the World Cultural and Natural Heritage;
- Stockholm Convention on Persistent Organic Pollutants;
- Cartagena Protocol on Bio-safety to the Convention on Biological Diversity;
- Protocol on Wildlife Conservation and Law Enforcement of the Southern African Development Community; and
- Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora.

4.6 COMPLEMENTARITY BETWEEN APPLICABLE WORLD BANK SAFEGUARD POLICIES AND ZAMBIAN LEGISLATION

Table 3 below shows the complementarity of the applicable WB Safeguard Policies and Zambian legislation. Both the WB Safeguard Policies and Zambia legislation recognize the importance of environmental and social benchmarks in order to mainstream environmental and social issues in development projects, and will, therefore, play a complementary role in the ZIFLP.

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Where there is a lack of alignment between WB and Zambian approaches, the WB approach will be adopted, as WB approaches are generally accepted as “good practice standards” by the ZEMA. Details around the social due diligence issues are addressed in the RPF and PF.

Table 3: Complementarity of Applicable WB Safeguard Policies and Zambian Legislation

| CATEGORY | WB SAFEGUARD POLICY | ZAMBIAN LEGISLATION |
|---------------|---|---|
| ENVIRONMENTAL | <ul style="list-style-type: none"> • Environmental Assessment OP/BP 4.01 • Natural Habitats OP/BP 4.04 • Forests OP/BP 4.36 • Pest Management OP 4.09 | <ul style="list-style-type: none"> • Constitution of Zambia Cap 1 • Environmental Management Act of 2011 • Forests Act of 2015 • Zambia Wildlife Act of 2015 • Agricultural Lands Act Cap 187 of 2006 • Water Resources Management Act of 2011 • Lands Act Cap 184 • Lands Acquisition Act Cap 189 • Urban and Regional Planning Act of 2015 |
| SOCIAL | <ul style="list-style-type: none"> • Physical Cultural Resources OP/BP 4.11 • Involuntary Resettlement OP/BP 4.12 | <ul style="list-style-type: none"> • Constitution of Zambia Cap 1 • Environmental Management Act of 2011 • National Heritage Conservation Commission Act, Cap 173 of 1989 • Lands Act Cap 184 • Lands Acquisition Act Cap 189 • Local Government Act, Cap 281 • Urban and Regional Planning Act of 2015 |
| | | <ul style="list-style-type: none"> • Arbitration Act No. 19 of 2000 • Land Survey Act Cap 188 • Valuation Surveyors Act Cap 207 |



5. ZIFLP SUB-PROJECTS AND POTENTIAL IMPACT ISSUES AND CONCERNS

5.1 IDENTIFICATION OF SUB-PROJECTS

The ZIFLP will implement many sub-projects based on community-driven demand, and the identification of sub-projects will be undertaken by the communities, wards, and districts through a participatory planning process. The ZIFLP also addresses key management issues around protected forests, GMAs and national parks. The typology of sub-projects to be implemented is given in Table 4 below. The list has been compiled based on the proposed Project activities and supplemented the REDD+ activities already being implemented in the Project area and a review of the following: REDD+ Strategic Plan; ZIFLP Vision; ZIFLP PAD; and Drivers of Deforestation and Forest Degradation in Eastern Province (UNIQUE, 2016a). The last column also assigns the World Bank environmental category.

Table 4: List of ZIFLP Sub-Projects and Environmental Category

| ZIFLP INTERVENTION AREA | POTENTIAL SUB-PROJECT | WB ENV CATEGORY |
|--|--|-----------------|
| Enabling Environment | Development of integrated district plans in 6 districts in the province | NA |
| | Preparation of community level land use plans at | NA |
| | Benefit Sharing Mechanism | NA |
| Climate-Smart Agriculture Practices | Conservation agriculture and integrated soil fertility management | B/C |
| | Technologies to improve smallholder farmers' productivity and resiliency to climate change (e.g. irrigation kits, rainwater collection devices, borehole | B/C |
| | Agroforestry | B/C |
| | Agriculture marketing and value chains | B/C |
| | Improved livestock management | B/C |
| | Small scale vegetable farming | B/C |
| Community-based Forestry Management | Afforestation/reforestation | B/C |
| | Community forestry management groups | B/C |
| | Forest management plan | B/C |
| | Community forestry enterprises | B/C |
| | Fire management and prevention | B/C |
| | Forest management near protected areas | B/C |
| | Alternatives to charcoal (biogas digesters, solar panel chargers, solar water heaters and fuel efficient | B/C |
| Wildlife Management | Park management plans | B |
| | Park buildings, guard houses | B |
| | Upgrading of existing roads and tracks | B/C |
| | Provision of water holes | C |
| | Fencing | C |
| | Purchase of equipment (radios, patrol) | C |

5.2 WORLD BANK SUB-PROJECT CLASSIFICATION

All subprojects identified in the ESMF are required to be screened for potential

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adverse environmental and social impacts in its area of influence, and beyond. The Bank uses four categories, depending on type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts. As shown in the table above, there are no category A subprojects, as agreed between the World Bank and GRZ.

Category A: A proposed project is classified as *Category A* if it is likely to have significant adverse environmental and social impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works. Environmental Assessment for a *Category A* project examines the project's potential negative and positive environmental and social impacts, compares them with those of feasible alternatives (including the "without project" scenario), and recommends any measures needed to prevent, minimize, mitigate or compensate for adverse impacts and improve environmental and social performance. For *Category A* projects, the borrower is responsible for preparing a report, normally an Environmental Impact Assessment (or a suitably comprehensive regional or sectorial EA).

Category B: A *Category B* project has potential adverse environmental impacts on human populations or environmentally important areas - including wetlands, forests, grasslands, and other natural habitats - which are less adverse than those of *Category A* projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for *Category A* projects. The scope of EA for a *Category B* project may vary from subproject to subproject.

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

Category FI: A proposed project is classified as *Category FI* if it involves investment of Bank funds through a financial intermediary such as local micro-finance entities, in sub-projects that may result in adverse environmental impacts. The ZIFLP will not have any FI subprojects.

The sub-project prototypes outlined in this ESMF are likely to be classified as *Category B* and *Category C* projects (see table 4 for the list of subproject types) and require either an environmental and social assessment or simple environmental and social

screening respectively. Considering the nature of district projects and sub-project prototypes expected for support under this Program *Category A* sub-projects are not expected. In case sub-projects are identified as *Category A*, they are not eligible for funds under the Program.

5.3 ZAMBIAN CLASSIFICATION

Instrument No. 28 of 1997 provides for Environmental Impact Assessment regulations that classify projects into either the **First Schedule** or **Second Schedule** depending on the size, nature and anticipated environmental consequences of a project or sub-

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project. The EIA Regulations provide lists of projects or sub-projects proto-types which fall under the two categories.

First Schedule: These are projects or sub-projects with minimal negative impacts on the environment and may require preparation of project briefs. Examples would include: Resettlement schemes, Hospitals, clinics and health centers, areas of human settlements, small scale projects such as beekeeping, crafts production, small scale fish-farming, raising of climate resilient livestock, climate-proofing of community-level infrastructure e.g. roads, embankments, etc.

Second Schedule: These are projects that require an extensive evaluation of activities likely to have significant negative impacts on the environment and require undertaking a detailed environmental impact assessment. Examples broadly include: urban development, transportation, dams, rivers and water resources, mining, forestry, agriculture, processing and manufacturing, waste disposal, electrical infrastructure and nature conservation areas.

It is clear that subprojects that fall under the Second Schedule of the EIA regulations require an EIA. However, it is unlikely that the sub-projects planned for implementation under ZIFLP will be classified under Schedule II due to the anticipated subproject sizes and nature of activities. Any subproject falling under World Bank Category A will become ineligible for funding, while ZEMA Schedule 2 would be possible, but would have to be upgraded to implementation at district, provincial or national level implementation, depending on national procedures including procurement.

The discussion below summarizes the alignment for environmental and social categorization under the World Bank project classification (categories A, B, C) to the classification under the national EIA regulations (first and second schedules).

World Bank Category C/ZEMA Schedule 1 Subprojects

It is anticipated that projects and sub-projects will fall under Category C or B (World Bank) or schedule 1 (ZEMA). The EIA regulation for these projects require preparation of an environmental project brief, if the category is unclear, with formal clearance by the national regulator. Based on experience from Zambia: Strengthening Climate Resilience, early engagement of ZEMA is required on the nature and scale of sub-projects so that there is an understanding on the extent of compliance and clearance procedure for such small scale projects. It is anticipated that ZEMA will agree to use of the screening checklist and application of the mitigation guidance for these small-scale subprojects.

World Bank Category B/ZEMA Schedule 2 Subprojects

Under ZIFLP there may be some infrastructure subprojects of a larger scale than small scale CDD like subprojects. These subprojects could include park road rehabilitation, small bridge rehabilitation, or construction of park facilities. As with all subprojects, the screening process will identify the safeguards category. These infrastructure

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subprojects are expected to be classified under category B (World Bank) and schedule 1 or 2 under ZEMA. Subprojects that would fall under category A (World Bank) will be disqualified from funding from the project.

The expected level of impact is assessed as part of sub-project preparation. For any sub-projects where initial screening process underlines that there will be significant social and environmental impact, the Climate Change Secretariat will be responsible for conducting an ESIA or equivalent. When this situation occurs, ESMPs will be required to be prepared by the Climate Change Secretariat, cleared by ZEMA, and implemented by the contractor.

World Bank Category A/ZEMA Schedule 2 Sub-projects

Sub-projects falling under category A/Schedule 2 are those that are likely to have significant and/or widespread and irreversible environmental and social impacts. Subprojects of this magnitude are not anticipated under ZIFLP, a precautionary principle should be applied that there is possibility that a few sub-projects may fall into Category B/ or Schedule 2.

5.4 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND CONCERNS

The overall Project goal is to create positive environmental and social outcomes through improving landscape management (reducing deforestation, forest degradation and reducing carbon emissions). This section starts with a description of potential environmental and social impacts and concerns across the subproject interventions listed above. The sub-projects are expected to generate mainly positive impacts. The potential negative impacts have been determined from a thematic or general intervention perspective. The potential environmental and social impacts and concerns are identified in Table 5.

In addition, under the Enabling Environment Component, the ZIFLP will support development of integrated district plans in the six target districts as well as community level land use plans. The Project has in parallel sponsored a separate study on Land Administration, Resource Tenure and Land Use Assessment focused on the Eastern Province. This study has (i) provided detailed information concerning land, forest tenure and land rights issues of relevance to REDD+ project objectives and activities; (ii) identified major challenges affecting customary lands, land occupancy, land and forest use management, and land acquisition and (iii) summarized resettlement and relocation experiences over the past 5-10 years in the Province. Such socially related issues are the focus of the RPF and PF and are not elaborated here.

These important social issues of concern will also be more deeply analyzed through a planned Social Impact Assessment (early 2017) and after World Bank Project approval as provincial wide Social and Environmental Strategic Assessment. These studies will make a positive contribution for prioritizing good practice across community land management, land policies and practices and the approach to carbon benefit sharing. The ZIFLP has also benefited from building upon land use planning activities being sponsored by COMACO and the USAID supported Chipata and Nyimba Land Alliance projects.

Table 5: Potential Environmental and Social Impact Issues and Concerns of ZIFLP Sub-Projects

| ZIFLP INTERVENTION AREA/ SUB-PROJECT | ENVIRONMENTAL AND SOCIAL IMPACT ISSUES/ CONCERNS |
|--|--|
| <p>CLIMATE-SMART AGRICULTURE PRACTICES</p> <ul style="list-style-type: none"> • Conservation agriculture and integrated soil fertility management • Farming (e.g. irrigation kits, rainwater collection devices, borehole drilling, solar water pumps) • Agroforestry • Agriculture marketing and value chains • Improved livestock management • Small scale vegetable farming <p>COMMUNITY-BASED FORESTRY MANAGEMENT</p> <ul style="list-style-type: none"> • Afforestation/reforestation • Community forestry management groups • Forest management plans • Community forestry enterprises | <p>Biodiversity</p> <ul style="list-style-type: none"> • Mono specific exotic tree plantings may alter natural vegetation; • Plantation tree seedlings may invade adjacent forest; • Biodiversity conservation (changes in flora and fauna); • Uniform age as clear felling may prevent succession processes. <p>Water Resources</p> <ul style="list-style-type: none"> • Alterations in local natural water cycles/hydrology. <p>Soils</p> <ul style="list-style-type: none"> • Changes in soil nutrient cycles (fertility and carbon storage capacity); • Increased soil erosion due to repeated disturbance; • Poor plantation management leading to physical impacts to soil structure and surface layers. <p>Air quality</p> <ul style="list-style-type: none"> • Deterioration from burning of biomass from clearing; • Reverse gains from carbon sequestration – adding carbon into atmosphere; • Dust emissions from milling operations. <p>Pesticides</p> <ul style="list-style-type: none"> • Improper application of pesticide amounts; • Application in rainy season resulting in ineffective targeting and increased runoff and uptake by soils and water bodies; • Use of highly toxic chemicals to plants, animals and humans; • Improper use, contamination by high exposure, no precautionary measures leading to health impacts. |

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| ZIFLP INTERVENTION AREA/ SUB-PROJECT | ENVIRONMENTAL AND SOCIAL IMPACT ISSUES/ CONCERNS |
|--|---|
| <ul style="list-style-type: none"> • Fire management and prevention • Forest management near protected areas • Smallholder uptake of biogas digester units, solar panel chargers, solar water heaters and fuel efficient cook stoves <p>WILDLIFE MANAGEMENT</p> <ul style="list-style-type: none"> • Improved management of the Lukusuzi National Park, surrounding game management areas and Luambe National Park including road and track upgrading (increased law enforcement, fire management) • Bi-national initiatives with Malawi for joint management measures • Adoption of improved management practices of wildlife at the community level • Infrastructure construction (housing, roads, fencing,) <p>ENABLING ENVIRONMENT</p> <ul style="list-style-type: none"> • Development of integrated district plans in 6 districts in the province • Preparation of community level land use plans at ward level • Benefit Sharing Mechanism | <p><i>Land tenure and ownership</i></p> <ul style="list-style-type: none"> • Lack of adequate documentation; • Lack of clear understanding of land use and occupancy; • Conflicts in land claims; • Increased values in land prices leading to economic displacement of poor land tenants; • Transparent rules for benefit sharing of carbon payments between land owner and farmer tenants ; • Rules and agreements in place for traditional chiefs revenue sharing with locals and other stakeholders; • Land acquisition and compensation issues; • Discrimination, lack of grievance mechanisms for all land users and tenants. <p><i>Maintaining Livelihoods</i></p> <ul style="list-style-type: none"> • Enhance food security through improved agriculture production on farmed lands to reduce forest pressures; • Potential expansion of negative activities by admitted settlements and farms that result in biodiversity loss, ecosystem changes, depletion of natural resources; • Increasing demand for forest lands for farming/ settlements by fringe communities because productive lands not available; • Adequate, documented and transparent compensation for admitted farmers in order to vacate unauthorized sections of forest. • Restricted access increases tension with park staff; • Increased exposure to illegal markets and people who may exploit local residents. • Blocking of traditional use of land; • Limits access to wild resources and income opportunities. <p><i>Farmer Rights</i></p> <ul style="list-style-type: none"> • Higher income from improved yields; • No financial benefit to farmers for planting and nurturing trees; |

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| ZIFLP INTERVENTION AREA/ SUB-PROJECT | ENVIRONMENTAL AND SOCIAL IMPACT ISSUES/ CONCERNS |
|--------------------------------------|--|
| | <ul style="list-style-type: none"> • Unreliable supply of seedlings; • Long gestation period of native species. <p>Forest Management</p> <ul style="list-style-type: none"> • Community inclusion in management decisions; • Community participation in surveillance and enforcement; • Protection of rights to use forest resources; • Alternative uses for forest waste – charcoal and biogas. <p>Security and Safety</p> <ul style="list-style-type: none"> • Safety and security of community informants or whistle blowers; • Safety and security of extension services staff; • Delayed court processes and low fines which do not create proper structures to punish or deter violations; • Low motivation of extension services staff – no proper incentive structure; • Unavailability and poor use of personal protective equipment and limited or no enforcement process. <p>Occupational health and Safety</p> <ul style="list-style-type: none"> • Lack of awareness creation programs on health and safety including chemical handling; • No Environmental, Health and Safety (EHS) Plan; • Unavailability and poor use of personal protective equipment and limited or no enforcement process. <p>Cultural Heritage</p> <ul style="list-style-type: none"> • Limited access to graves and cemeteries; • Preservation of local cultural identity and heritage; • Compensation issues; • Community pride and support; • Community relinquishing or sharing heritage/ traditional practices for greater good. |

5.5 MITIGATION MEASURES

Some of the notable environmental and social impacts are likely impacts land, water and vegetation. The impacts will affect biodiversity, pollution of water and soils, degradation of forests and land, as well as aquatic resources. These negative impacts have been identified, assessed and mitigation measures suggested to avoid or minimize impacts. Table 6 below presents an overview of the environmental impacts, mitigation measures and the required capacity building. Table 7 also provides some key social related mitigation measures. These checklists are based on the experience of the ICCS across both its PPCR and Displaced Persons and Border Communities projects. It is anticipated that during early implementation of ZIFLP the ICCS will expand and build these “tools” as the project expands across the Eastern Province, pilot districts and selected communities.

Table 6: Environmental Mitigation Measures *

| SUBPROJECT | ENVIRONMENTAL IMPACTS | MITIGATION/ENHANCEMENT MEASURE(S) | CAPACITY BUILDING |
|---|--|---|--|
| <p>Agriculture and Livestock Practices</p> <p><i>Land Husbandry</i></p> <ul style="list-style-type: none"> Introducing/scaling-up conservation tillage and soil moisture retention - improved management of soil moisture through use of mulch/organic matter and conservation of soil organic matter; | <ul style="list-style-type: none"> Increased pressure on land as demand is likely to be triggered by improved incomes from good soil management and moisture retention Intensives use of land may lead to unsustainable land use practices such as increased/inappropriate use of pesticides and fertilisers Increased land clearing that may result in deforestation, land degradation and soil erosion | <ul style="list-style-type: none"> “Composting” of animal manure, grass and plant material for application to fields – for increased soil moisture retention and improved soil texture in sandy areas such as those the Barotse Sub-basin Use of mulch/organic material to reduce loss of soil moisture through evapotranspiration Sensitisation and capacity building on land planning use management Promotion of good land use planning and practices such as terracing on steep slopes Promotion of agroforestry as part of erosion control measures Promote erosion control along areas adjacent to the canals | <ul style="list-style-type: none"> Sensitisation campaigns on land management in the context of climate change Training in environmental and land husbandry practices Training in conflict resolution Strengthening of extension skills and mentoring support provided by both government and NGO facilitators |
| <p><i>Crop Husbandry</i></p> <ul style="list-style-type: none"> Diversifying agricultural practices such as crops/varieties grown including those that can be drought tolerant or grown under water logged conditions or staggering time of plantings; Changing times for applying agriculture inputs to take advantage of available moisture and rainfall; | <ul style="list-style-type: none"> All year round crop production is likely to increase demand for water leading to construction of weirs and small dams which may affect water flows downstream, Diversification to climate resilient crops may introduce some invasive species Use of chemical fertilizers likely impact the environment and affect the quality of water in the rivers and streams Increased crop production will likely increase the use of herbicides/pesticides which will affect the environment and the quality of water Increased crop production likely increase demand for improvement of market centres and access (feeder) roads and farm-to-market road network which will impact the environment (see section on rural roads below) | <ul style="list-style-type: none"> Introduce good practices for water resources sharing and management that reduce/eliminate water conflicts Utilise furrows and drainage canals to drain excess water from fields to allow early planting Utilise water conservation technologies and strategies to reduce demand for ground and surface water Introduce good crop husbandry planning and farming best practices that include ideal timing for planting and application of soil nutrients Promotion of organic farming alongside conservation agriculture Introduce management plans for appropriate use of fertilisers Develop a pesticide management plan (PMP) that adheres to WB and AfDB safeguard policies and ZEMA regulations Promote use of integrated pest management and only use herbicides/pesticides as a last resort particularly near rivers, streams, canals and small dams Use pesticides/agro-chemicals with short residual period Avoid introducing alien plant species or crop varieties that may be invasive | <ul style="list-style-type: none"> Sensitisation campaigns on crop and horticultural production in the context of climate resilience Training in climate resilient agricultural practices Training in good fertiliser and pest/pesticide management in environmentally sensitive environments Training in post-harvest technologies, value addition and marketing Sensitisation in basic requirements of environmental safeguard policies and local legislation |

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| SUBPROJECT | ENVIRONMENTAL IMPACTS | MITIGATION/ENHANCEMENT MEASURE(S) | CAPACITY BUILDING |
|--|--|--|---|
| <p><i>Animal Husbandry</i></p> <ul style="list-style-type: none"> Diversifying livestock production (small livestock raised) and when appropriate culturally or land-use wise use /or integration of crops and livestock (e.g. goats, sheep, chickens) in a mixed farming system Improved management of pastures/ grazing land Livestock production (increase proportion of climate resilient livestock or increased livestock variety) | <ul style="list-style-type: none"> Clearing of land to create grazing fields Increased numbers of climate resilient livestock may result in over exploitation of natural resources that include water and pasture land Contamination of water bodies at livestock watering points/crossing points Unsustainable use of wetlands for grazing and watering animals during dry periods of the year may disrupt wetland ecological processes | <ul style="list-style-type: none"> introduce mixed farming approaches by integrating crop and livestock production systems avoid overgrazing due to overstocking through effective control of livestock numbers staying within carrying capacity of the land Put in place effective soil erosion control measures for managing pastures and reduces contamination of water at livestock watering points Where feasible and culturally acceptable, consider introduction of rotational grazing and zero-grazing supported by production of fodder crops Mix different livestock species (goats, sheep, cattle, donkeys) to fully exploit vegetation resources Where feasible, consider reforestation and replanting of climate tolerant grass varieties Community sensitization on good pasture management and use of communal feedlots and introduction of fodder crops | <ul style="list-style-type: none"> Sensitisation campaigns on livestock diversification and pasture management Training in good livestock production, including breeding Sensitisation in basic requirements of environmental safeguard policies and local legislation |
| <p>Small-Scale Aquaculture-</p> <p>Construction/rehabilitation of fish ponds in order to ensure supply of fish throughout the year</p> <p>Restocking of fish ponds</p> | <ul style="list-style-type: none"> Poor aquaculture management may disturb the bio-diversity of the ecosystem Aquaculture may result in the introduction of alien fish species some of which may be invasive | <ul style="list-style-type: none"> Select locations which do not have other important land uses e.g. use of existing depressions, hollows and ditches. Avoid siting points adjacent to areas with high biodiversity values Construct ponds in a manner that ensures good drainage and erosion control Plant vegetation (trees and grasses) on the edges and between ponds Good aquaculture management should be promoted to ensure that there are no direct threats to the ecosystem and to the indigenous fish species. | <ul style="list-style-type: none"> Specialised training in aquaculture management through short courses and/or exchange visits Training in biodiversity management and conservation of fragile ecosystems through short courses and/or exchange visits |
| <p>Community level water Infrastructure(<i>boreholes , wells)</i></p> <ul style="list-style-type: none"> To provide access to water during prolonged droughts | <ul style="list-style-type: none"> Inadequate access to water may lead to inappropriate use or over exploitation of existing resources such as wetlands flooding likely to lead to loss of natural habitat and altered aquatic life Disruption of water flow downstream Disruption of fish migration | <ul style="list-style-type: none"> Rehabilitate boreholes/wells that provide water in all seasons Avoid construction of small water structures near or adjacent to protected areas or natural habitats e.g. wetlands | <ul style="list-style-type: none"> Basic training in integrated water resources management and conservation of natural habitats through short courses and/or exchange visits Basic training in water use and resource management in relation to smallholder under irrigation through short courses and/or exchange visits |

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| SUBPROJECT | ENVIRONMENTAL IMPACTS | MITIGATION/ENHANCEMENT MEASURE(S) | CAPACITY BUILDING |
|--|---|---|--|
| <p>Wildlife Sanctuaries, communal game ranching</p> | <ul style="list-style-type: none"> • In areas near national parks and game management areas, infrastructural sub-projects may lead to destruction of natural habitat that result in the <ul style="list-style-type: none"> - displacement of wildlife; - blocking of wildlife migration routes - competition for pasture between domestic and wild animals | <ul style="list-style-type: none"> • Fencing off of protected wildlife habitats (national parks and game management areas) • Consider the possibility of establishing wildlife sanctuaries or wild life estates linked to income generation through tourism • Establish communal game ranching to ensure conservation of wildlife/natural resources supported by income generation through tourism and controlled game hunting | <ul style="list-style-type: none"> • Specialised training in wildlife management and game ranching • Training in biodiversity management and conservation of fragile ecosystems • Training Business management and entrepreneurial skills through short courses and/or exchange visits • |
| <p>Community forests, reforestation</p> | <ul style="list-style-type: none"> • Increased pressure on land due to increased farming activities may result in unsustainable utilisation of natural resources such as deforestation, encroachment on | <ul style="list-style-type: none"> • Establishment of forests managed by the community drawing on local culture, traditions and indigenous knowledge • Avoid locating forests near or adjacent to protected areas such as wetlands, watershed | <ul style="list-style-type: none"> • Basic training in management and forests and conservation of natural habitats through short courses and/or exchange visits |

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| SUBPROJECT | ENVIRONMENTAL IMPACTS | MITIGATION/ENHANCEMENT MEASURE(S) | CAPACITY BUILDING |
|--|---|---|---|
| <p>Effective benefit-sharing ensures sustainable management of community forests</p> | <p>watershed areas and dambos, soil erosion etc.</p> <ul style="list-style-type: none"> Illegal logging of timber may lead to large scale deforestation and destruction of natural habitats Introduction of invasive tree species (e.g. black wattle) may threaten the ecosystem | <p>and areas with high biodiversity value e.g. the Kafue Flats and Barotse Plains</p> <ul style="list-style-type: none"> Establishment of tree nurseries including fruit-tree seedlings Tree planting of fast growing indigenous tree species using local labour Ensure well-planned harvesting of trees e.g. unconnected blocks Promote the use of non-timber forestry products (NTFPs – e.g. wild fruits, honey, mushrooms, caterpillars) | <ul style="list-style-type: none"> Training in business management and entrepreneurial skills through short courses and/or exchange visits |
| <p>Roads</p> <ul style="list-style-type: none"> Upgrading and maintenance of community feeder roads basin Rehabilitation of community road infrastructure (farm-to-homestead) to climate resilience standards | <ul style="list-style-type: none"> Increased pressure on natural resources (land, water, forests) as a result of influx of population due to voluntary settlement along the improved roads Loss of natural vegetation near roads/important habitats Air pollution (increased dust) during construction/ rehabilitation of roads extraction of road construction materials e.g. gravel from borrow-pits Disruption of water flow /blocked drainage at culverts and bridges Contamination through accidental spillage of lubricants and fuels | <ul style="list-style-type: none"> Promote controlled settlement along improved roads with assistance of traditional and local authorities Minimise clearing of vegetation Institute erosion control measures especially at culverts/bridges Design roadside drainage control (culverts/bridges that can handle anticipated water flows Ensuring culverts and bridges of correct size and are installed at strategic points along the road Ensure adequate and timely maintenance of culverts and bridges Put in place measures to prevent spilling of oils and fuels and where feasible, recycle used oils. | <ul style="list-style-type: none"> Training in environmental and natural resources management in relation to road construction Sensitisation in basic requirements of environmental safeguard policies and local legislation Training in conflict resolution |
| <p>Protection of local infrastructure and assets</p> <ul style="list-style-type: none"> Climate proofing of local community infrastructure such as community service centres (markets, clinics, schools etc) | <ul style="list-style-type: none"> No major environmental impacts are anticipated from the sub projects | <ul style="list-style-type: none"> Strengthening of local planning processes, participatory land use planning, development planning, community planning of protected area planning Siting and construction of new buildings in areas which are shielded from floods, storms and strong wind Construction of drainage/storm drains protect fields from floods Construction of gabions and other stabilization/erosion prevention structures to protect fields Siting and construction of construction of ponds, channels for water retention, storage and directing running off Dredging, ditching, construction of cut-off channels direct water flow | <ul style="list-style-type: none"> Sensitisation campaigns on environmental and natural resources management Training in environmental protection and ecosystems planning and management Sensitisation in basic requirements of environmental safeguard policies and local legislation |

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| SUBPROJECT | ENVIRONMENTAL IMPACTS | MITIGATION/ENHANCEMENT MEASURE(S) | CAPACITY BUILDING |
|--|---|--|---|
| <p>Enhanced Local capacities for coping with Climate Change</p> <ul style="list-style-type: none"> Support to community level climate adaptation | <ul style="list-style-type: none"> No major environmental impacts are anticipated from the subprojects | <ul style="list-style-type: none"> Develop mechanisms' for Climate vulnerability and hazard mapping Strengthening the level of community organisations e.g. water users associations, traditional structures Development of climate information management systems that tap into both modern and tradition weather warning systems Strengthening of local climate resilience structures such as Satellite Disaster Management Committees, Community, Water User Associations, Village Development Committees, Marketing Associations, Women Development Groups, Youth Organizations Strengthening of community level organisation and governance Strengthening of traditional institutions in climate resilience | <ul style="list-style-type: none"> Sensitisation and training in climate information systems change adaptation including vulnerability and hazard mapping Sensitisation in basic requirements of environmental safeguard policies and local legislation |

* Adapted from the Zambia Improving Resilience and Social Cohesion of Displaced Persons and Border Communities ESMF issued by the ICCS

Table 7: Social Mitigation Measures

| ENVIRONMENTAL, SOCIAL AND HEALTH IMPACT ISSUE | MITIGATION ACTION/ MEASURE |
|---|--|
| LAND TENURE AND OWNERSHIP | <ul style="list-style-type: none"> • The Project will develop land use plans at ward level; • Research and stakeholder consultations to identify best practices and guide implementation in partnership with traditional authorities. • A benefit sharing mechanism will be developed; • Byelaws will be used to support the conservation of dedicated forests and to sanction encroachment. |
| MAINTAINING LIVELIHOODS | <ul style="list-style-type: none"> • Illegal settlements and encroachers in protected areas will have to return to permitted areas. They may, therefore, have to be compensated for loss of livelihoods; • Ensure appropriate compensations are paid to Project Affected Peoples (PAPs); • Employment and other opportunities will be given to local communities as much as possible. |
| FARMER RIGHTS | <ul style="list-style-type: none"> • Farmers, through the Provincial, District and local Area Development Committees to participate in discussions that safeguard their rights. |
| SAFETY AND SECURITY | <ul style="list-style-type: none"> • Forestry Department to devise policies and procedures to protect field staff; • Forestry Department forestry prosecutors to be adequately trained to efficiently handle court cases for swift determination. |
| OCCUPATIONAL HEALTH AND SAFETY | <ul style="list-style-type: none"> • The Project will design and implement awareness creation programs to educate persons on protecting workers' health and safety including paying attention to chemical handling. The Project will require preparation and implementation of an Environmental, Health and Safety (EHS) plan which will outline procedures for avoiding health and safety incidents and for emergency medical treatment; • Workers will be required to wear suitable Personal Protective Equipment (PPE) as appropriate; • Workers will be sufficiently trained in the safe methods pertaining to their area of work to avoid injuries. The use of PPEs to be encouraged and with incentives; • The Project will encourage the use of personal protective equipment/ apparels such as wellington boots/ safety boots, gloves, overalls and raincoats for field workers; • The Project will conduct safety training for pesticide handlers and all agricultural workers. The training project will include handling of agro-chemicals, use of PPE and what to do in the case of pesticide exposure. |
| CULTURAL HERITAGE | <ul style="list-style-type: none"> • Any cultural site including cemeteries and graves on proposed plantations will, with the agreement of the community be well demarcated and the area not cleared for development. |

Wildlife Anti-Poaching/Enforcement Activities

Some project activities under Subcomponent 2.3 include: preparation of park management plans, investments in infrastructure such as guard houses or other park buildings, upgrading of existing roads and tracks to facilitate park management and ecotourism, purchase of equipment such as radios for communication, park guard equipment, patrol equipment, etc. and support to park patrols, with a particular focus on management of poaching.

The overall risk of abuse of power and other misuse of wildlife anti-poaching activities is low because of the small size of the project, and the restricted and very specific enforcement related activities that will be supported. Despite the low risk, in terms of monitoring and control, ZILFP will generate annual and quarterly reports that include information on enforcement activities to provide for rapid problem identification and correction as well as GRM complaints (including data on types of complaints, quantities and resolution data) that may also contain related information. The project will follow a participatory approach and so Project Affected Peoples will be encouraged to report any issues or problems with wildlife law enforcement activities under the project especially through the project GRM. Recordkeeping will be supported.

Operating procedures for wildlife law enforcement activities will be documented. Documented operating procedures, will support the ability to hold agency staff accountable for their actions.

Guards and other personnel will undergo an orientation in which they will learn about the expected code of conduct adapted from the UN Code of Conduct for Law Enforcement Officials² as well as the existing DNPW standard operating procedures and procedures under the Zambia Wildlife Act (2015), in particular section XIII on enforcements (rights and duties). The Project will support procedures that involve nonviolent, nonlethal restraints. A uniform chain-of-custody protocol for evidence will be developed as appropriate so as to avoid relying too much on confessions (which may legitimately be a primary form of evidence in some cases, but may also raise concerns of possible coercion), and promote the use of physical evidence.

² <http://www.ohchr.org/EN/ProfessionalInterest/Pages/LawEnforcementOfficials.aspx>. Accessed January 18, 2017.

6. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The Environmental and Social Management Plan (ESMP) provides guidance to the implementing organizations on procedures to be followed and standards to be met in implementing the subprojects which should be in agreement with national and World Bank safeguard provisions. Roles and responsibilities of the national, Provincial and district and other collaborating agencies are clearly defined as well as monitoring protocols to be followed to ensure that the required provisions are adhered to. Finally, budgetary estimates are provided to support the implementation of the environmental and social management plan.

The ESMP will be included in the project's Manual of Operations. The ESMP outlines mechanisms for:

- Screening of proposed subproject interventions, identifying potential environmental and social impacts and management of safeguard policies implications;
- Arrangements by the ICCS, PPU, and other relevant institutions for implementation and their capacity building;
- Monitoring ESMP measures implementation;
- Community consultations;
- The estimated costs related to the ESMP.

6.1 THE SUB-PROJECT SCREENING PROCESS

The purpose of the preliminary screening is to: (i) determine whether projects are likely to have potential negative environmental and social impacts; (ii) decide if a EPB form needs to be submitted to ZEMA; (iii) identify appropriate mitigation measures for activities with adverse impacts; (iv) incorporate mitigation measures into the subproject design; (v) review and approve projects proposals and (vi) monitor environmental and social impacts and concerns during implementation. The early screening process will also consider the provisions of the Process Framework for possible livelihood impacts

The E&S coordinators must carry out the preliminary environmental and social screening of proposed projects by using the checklist suggested in Annex 3. If significant impacts are anticipated then ZEMA must be consulted and determination of Environmental Assessment (EA) procedures duly followed.

When there are minimal or no impacts (as determined using the checklist), community coordinators must consult with the Environmental and Social Safeguard Focal Person for confirmation. Once an agreement is reached, the local and district coordinators may proceed with the minimum regular reporting requirements which will be discussed and agreed with the PPU E&S Focal point. When there may be doubt concerning subproject risks and impacts, the local and/or ICCS E&S inclusion Manager for guidance.

Draft ZIFLP Environmental and Social Management Framework**6.2 SUB-PROJECT REVIEW PROCEDURE**

Table 8 below shows the safeguards screening process and responsibilities for the ZIFLP sub-projects. This process has been aligned with the processes for other programs that the ICCS is implementing including the Pilot Program for Climate Resilience (PPCR) in the Western Province of Zambia and the Displaced Persons and Border Communities program.

Table 8: ZIFLP Sub-projects Safeguards Screening Process

| STAGE | SUB-PROJECT ACTIVITY | SAFEGUARDS ACTIVITY | RESPONSIBILITY |
|-------|--|---|---|
| 1. | Mobilization of community facilitators | - | Community organizations, Area Development Committee |
| 2. | Sub-project identification | - | Community organizations, Area Development Committee |
| 3. | Sub-project preparation – sub-project application using a designated form | Preliminary environmental and social screening of identified sub-project | Community organizations, Area Development Committee |
| 4. | Desk appraisal of sub-project | Desk appraisal of environmental and social aspects and impacts. Any proposed sub-projects that may have significant negative environmental or social impacts will be screened out. (Refer to the EIA Second Schedule and consult the ICCS Environmental and Social Inclusion Manager) | District Planning Office |
| 5. | Field appraisal of sub-project | Field appraisal of environmental and social impacts and preparation of a simplified ESMP checklist and monitoring schedule to accompany the application for sub-project funding | District Planning Office with in consultation with the environmental and social expert at the PPU |
| 6. | Submission of application to the Provincial Program Implementation Unit (PPIU) | Desk appraisal by the PPU in consultation with the PPU environmental and social expert-if necessary also the ICCS E&S Inclusion Manager | PPU |
| 7. | Submission of application to the ICCS (recommendation for funding) | Review by the environmental and social expert at the ICCS | Environmental and social expert at the ICCS |

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| | | | |
|-----|---|-----------------------------|----------------------|
| 8. | For significant E&S Impacts Submission to ZEMA as determined by ICCS | Review by ZEMA ¹ | ZEMA |
| 9. | Decision letter from ZEMA | - | ZEMA |
| 10. | If EPB is recommended, procure a consultant to prepare EPB, RAP or LRP and submit to ZEMA | Review by ZEMA | ZEMA |
| 11. | Disbursement clearance | - | ICCS |
| 12. | Implementation | - | Community |
| 13. | Monitoring | - | Community, DPIU, PPU |
| 14. | Completion | - | DPIU, PPU |

6.3 PUBLIC CONSULTATION AND DISCLOSURE

The ESMF preparation included stakeholder consultations, and the key Project stakeholders identified for consultations included government ministries, government agencies, NGOs, royal establishments, community leaders and local communities in the study area.

Meetings were held with key officials and opinion leaders to gauge the level of awareness and involvement with the proposed Project, concerns of Project implementation, and to obtain relevant documents or baseline information. The consultations also served to gather information on institutional mandates and permitting requirements to inform the development of the Project.

The list of stakeholders contacted and issues discussed are summarized in Annex 1.1.

The Inception Report for this ESMF was discussed at a stakeholder meeting held at the ICCS in Lusaka, and this ESMF will be further discussed at a workshop in Chipata. Copies of the ESMF will also be made available to the public at Chipata, Katete, Lundazi, Mambwe, Nyimba and Petauke District Council Offices. The EPBs, RAPs and LRPs will also be disclosed to various stakeholders in a similar manner as required during project implementation. The dissemination of the ESMF is for information purposes, as the instrument is not a legal requirement under the EMA and the EIA (1997) Regulations.

To meet the consultation and disclosure requirements of the WB, the implementing agency will issue a disclosure letter to inform the general public and key stakeholders of the approval of relevant environmental assessment reports. This stage of disclosure will also serve as Government's authorization to the World Bank to disclose such documents in its Info shop in Washington D.C.

¹ The ZEMA EIA Management System requires that a project proponent communicate to the Agency regarding a potential development project or activity. This review will serve as an additional safeguard for the management of potential environmental and social impacts.

ZEMA Consultation Requirements if Needed

According to Zambia's EIA regulations (SI No. 28 of 1997), public consultations are an integral component of the EIA requirements, and the EIA Guidelines identify the following principal elements:

- Developers are required to conduct public consultations during the preparation of the EPBs, RAPS, LRPs and EIAs;
- The Director General of the Environmental Management Agency may, on the advice of the Environmental Assessment Committee (EAC) of the ZEMA Board, conduct his or her own public consultation to verify the works of a developer;
- Formal EIA documents are made available for public review and comments. Documents to which the public has access include EPBs, RAPS, LRPs, EIA terms of reference, draft and final EIA reports, and decisions of the Director General of the Environmental Management Agency regarding project approval. The Director General, on the advice of the EAC, will develop practices and procedures for making these documents available to the public;
- Decision Letter-approved projects will be published by the developer and displayed for public inspection; and
- Public consultations are critical in preparing an effective proposal for the implementation of the project activities. These consultations should identify key issues and determine how the concerns of all parties will be addressed in response to the terms of reference for the EIA.

The Zambian EIA regulations (1997) provide details concerning the public consultation methods. Such methods include information notices, brochures/ fliers, interviews, questionnaires, community meetings and public hearings. In terms of Zambia's EIA process, public consultation should be undertaken during: (i) the preparation of the EIA terms of reference; (ii) the carrying out of an EIA; (iii) Government review of an EIA report; and (iv) preparation of environmental terms and conditions of approval.

The first step in the public engagement and disclosure process is to hold public consultations with the local communities and all other interested/ affected parties during the screening process. These consultations are aimed at briefing the communities about the project activities, how the activities will be carried out and what sectors of the environment are likely to be impacted. The public consultations will be done in a participatory manner to encourage the communities to contribute to the screening process.

During the preparation of the Terms of Reference for an EIA, the project proponent submits draft ToR to ZEMA to ensure that the ToR are comprehensive enough to cover all the sectors of the environment and that they conform to the EIA procedures as outlined in the EIA Guidelines. ZEMA also ensures that the social and health impacts of the project activities are adequately covered in the EIA report.

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In the course of preparing the EIA the consultant conducts extensive public consultations to attract and capture comments from the stakeholders as well as the communities for incorporation in the EIA report. The stakeholders and communities, including institutions are asked to contribute to the identification of impacts and to proposed mitigation measures for the negative impacts. They are also asked to comment on how the positive impacts may be enhanced.

When reviewing the EIA report, the EAC ensures that the relevant stakeholders, including potentially affected persons, were adequately consulted with regard to the potential impacts of the proposed project activities. Consultation methods applicable to the ZIFLP will include workshops, community meetings, public hearings or information notices, which will be organized through the district and local authorities.

6.4 MONITORING AND EVALUATION

Adherence to World Bank and Zambian environmental and social policies and legislation usually raises challenges during the implementation phase of most projects. Therefore, monitoring is critical to the successful implementation of the sub-projects under the ZIFLP components.

It is envisaged that monitoring will be undertaken at the ESMF and sub-project levels. At the ESMF level, monitoring issues will include approval and dissemination of ESMF, RPF and PF documents, as well as capacity building and training activities. At the sub-project level, monitoring activities will focus on safeguards training and safeguards monitoring throughout the project cycle.

Monitoring plans will be developed to track safeguard provisions at both the ESMF and sub-project levels. The monitoring plan is presented in the Table 9.

Table 9: ESMF, RPF, and PF monitoring indicators and responsibilities

| No. | MONITORING LEVEL | MONITORING ISSUE | VERIFIABLE INDICATOR | RESPONSIBILITY |
|-----|------------------|--|--|----------------|
| 1. | ESMF level | Completion and approval of ESMF, RPF and PF | Completed reports | ICCS, WB |
| | | Adequate dissemination of ESMF, RPF and PF to stakeholders | <ul style="list-style-type: none"> • Record of consultations and meetings • Records of workshops | ICCS |
| | | Identification of capacity gaps | Reports | Consultants |
| | | Identification of safeguards training needs | Reports | Consultants |

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| No. | MONITORING LEVEL | MONITORING ISSUE | VERIFIABLE INDICATOR | RESPONSIBILITY |
|-----|----------------------------|--|---|-------------------------|
| 2. | Sub-project activity level | Safeguards training | Reports | ICCS, Consultants, ZEMA |
| | | Screening of sub-project | Completion of preliminary environmental and social screening form | DPIU, ICCS |
| | | Appraisal of sub-project | Completion of field appraisal and Monitoring form | PIU, ICCS |
| | | Adequate mitigation measures provided to manage adverse impacts | Completion of preparation of simplified ESMPs | PIU, ICCS |
| | | Preparation of EPBs | Completed EPB | ICCS |
| | | Preparation of RAPs | Completed RAP | ICCS |
| | | Preparation of LRPs | Completed LRP | ICCS |
| | | Sub-project satisfies statutory provisions (EIA Regulations of 1997) | Approved EPB, RAP, LRP | ZEMA |
| | | On-going sub-project monitoring and evaluation | Quarterly and annual monitoring reports | ICCS, WB |
| | | Licensing and monitoring sub-project EPB, RAP or LRP approval conditions | Monitoring reports | ZEMA |

6.5 COST ESTIMATES

To boost the capacity of ICCS, 3 safeguards and stakeholder engagement specialists will be hired in addition to existing ICCS safeguard staff levels. 1 at the national level, and 2 at the Eastern Province headquarters. These 3 personnel will be fully funded by the project. Their main task will include monitoring and supervision of social aspects related this project. The cost of implementing and monitoring the ESMF is estimated at US\$1,604,580 for the 5 years of the project. The cost estimate includes personnel, training, screening and monitoring and supervision and is given in Table 10 below.

Table 10: Cost Estimate for ESMF Implementation

| NO. | ACTIVITY | DESCRIPTION | COST (US\$) |
|-----|-----------------------|--|--------------|
| 1. | Safeguards Personnel | 1 E&S safeguards manager at NPU 1 environmental safeguards officer at PIU 1 social safeguards officer at PIU (US\$)5,000x12monthsx3 staffx6years) | 1,080,000.00 |
| 2. | Training district and | 2 Capacity building | 241,200.00 |

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| | | | |
|--------------|---|--|---------------------|
| | communities in safeguards procedures Sub-project Screening | workshops/Orientation meetings per year Sub-projects screening and review (US\$)90x30 peoplex10 daysx6 years) + (20/person x 30 people conferencing x 10 days x 6 years) + (120 transport costs x 30 x 2 workshops x 6years) | |
| 3. | Training of safeguards focal persons in the district | 10 days training of designated safeguards focal persons per year (agric/forestry or wildlife officer) (90x10 peoplex10 daysx6 years) + (20/person x 10 people conferencing x 2 trainings x 10 days x 6 years)+ (120 transport costs x 10 days x 2 workshops x 6years) | 150,000.00 |
| 4. | Monitoring/supervision | 5 days quarterly oversight, due diligence and monitoring by 1 NPU safeguards manager, 2 PIU safeguards officers (90 x 5days x 3 people x 3 quarters x 6 years)+(120 transport costs x 3 people x 3 quarters x 6 years) | 30,780.00 |
| 5. | Stakeholder engagement | Provincial reviews, consultations, information sharing (90x30 peoplex5 daysx6 years) + (20/person x 30 people conferencing x 5 days x 6 years) + (120 transport costs x 30 x 1 workshops x 6 years) | 102,600.00 |
| TOTAL | | | 1,604,580.00 |

7. INSTITUTIONAL CAPACITY ASSESSMENT FOR THE ESMF IMPLEMENTATION

The ZIFLP will be implemented by Provincial and District level structures in close coordination with the ICCS. Communities and local level NGOs will be responsible for the implementation of community-based activities. Reporting will be from the community/NGO level to districts and PIU. The PIU will report to the ICCS through the PPU of the EP administration.

The ICCS Environmental and Social Safeguards Unit will oversee implementation of the ESMF, the RPF and the PF including the development of any other safeguards instruments that are or will become necessary for the Project. The ICCS has deep understanding and good capacity in management of safeguards, and has an experienced and well-trained safeguards manager, familiar with World Bank guidelines. The ICCS has been implementing the Zambia Strengthening Climate Change Resilience Project, with a satisfactory safeguards compliance track record.

A review of available human resource for safeguards oversight shows that while experienced, environmental and social safeguards staffing is lean to adequately cover the ZIFLP. Therefore there will be a need to hire and retain 1 experienced environmental safeguards officer and 1 social safeguards officer at the PIU in EP to support the environmental and social safeguards manager at the NPU. Typically, MDAs at the province and district levels do not have personnel with environmental and social safeguards experience and World Bank safeguard policies in particular. Therefore there will be need to identify and designate a safeguards focal person at the district who will be supported with necessary training for safeguards implementation at community and district level.

Table 11: ZIFLP Capacity Building Requirements

| REF. | ENTITY | ESMF RESPONSIBILITIES | CAPACITY BUILDING REQUIREMENTS |
|------|---|--|--|
| 1. | Interim Climate Change Secretariat/NPU (1 safeguards manager) | <ul style="list-style-type: none"> Monitoring and reporting of compliance and implementation of mitigation mechanisms at National level | <ul style="list-style-type: none"> Could benefit from a study tour to share safeguards implementation experiences in other countries where similar Programs are being implemented Preparation of Terms of Reference for ESIA |
| 2. | PIU (2 safeguards officers) | <ul style="list-style-type: none"> Monitoring and reporting of compliance and implementation of mitigation mechanisms at Provincial level | <ul style="list-style-type: none"> Workshops on the ESMF/RPF and relevant World Bank safeguard policies Environmental and social Screening Process and Checklists Zambian EIA Procedural Frameworks Preparation of simplified ESMP for sub-projects |
| 3. | District agents (designated safeguards focal persons) | <ul style="list-style-type: none"> Environmental and social screening of identified sub-projects at desk and field appraisal stages Site sensitivity assessments for proposed subprojects Monitoring and supporting communities in the implementation of the projects and implementation of mitigation measures | <ul style="list-style-type: none"> Workshops on the ESMF/RPF and relevant World Bank safeguard policies Environmental and social Screening Process and Checklists Zambian EIA Procedural Frameworks Preparation of simplified ESMP for sub-projects Preparation of Terms of Reference for ESIA |
| 4. | Community Implementers/Communities and Wards | <ul style="list-style-type: none"> Preliminary environmental and social screening of identified sub-project Preparation of sub-project proposals Implementation of subprojects, including environmental and social mitigation measures | <ul style="list-style-type: none"> Workshops on the ESMF/RPF and relevant World Bank safeguard policies Environmental and social Screening Process and Checklists Zambian EIA Procedural Frameworks Preparation of simplified ESMP for sub-projects Participatory Rapid Appraisal process for community decisions Basic environmental and social safeguards training Monitoring of environmental and social mitigation measures |

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| | | | |
|----|------------------------|--|--|
| | | | <ul style="list-style-type: none"> • Provision of monitoring equipment |
| 5. | NGOs/CBOs | Facilitation of sub-project applications with environmental and social safeguards assessments and mitigation measures | <ul style="list-style-type: none"> • Participatory Rapid Appraisal methodology and training of trainers Workshop on the ESMF/RPF/PF and relevant World Bank safeguard policies, including GBV prevention mechanisms |
| 6. | Communities and Wards | <ul style="list-style-type: none"> • Preparation of sub-project applications • Oversight of implementation of projects, including environmental and social mitigation mechanisms | <ul style="list-style-type: none"> • Participatory Rapid Appraisal process for community decisions • Basic environmental and social safeguard training, including monitoring |
| 7. | Agricultural Producers | <ul style="list-style-type: none"> • Participating in/executing sub-projects on the ground | <ul style="list-style-type: none"> • Training in Integrated Pest Management (including proper use, storage, and handling of pesticides and other agrochemicals). |

7.1 SAFEGUARD COMPLIANCE IN PARTICIPATORY PROJECT PLANNING, IMPLEMENTATION AND COMMUNITY ENGAGEMENT

Community driven projects and community ownership are essential in ensuring compliance to environmental and social safeguards. Based on various levels of interactions and consultations with communities in the target districts and lessons from on-going similar projects, it is notable that in public sector institutions service delivery does not adequately meet the communities’ expectations. Therefore, NGOs, CBOs and the private sector have attempted to fill the gap left by public sector institutions in providing support services and undertaking capacity building interventions for the communities.

These support and capacity services are critical in empowering communities to take responsibility for their own development through planning and managing their own projects. When communities get empowered in this way, it follows that they will take greater responsibility for the ensuring of compliance to environmental and social safeguards.

Specific courses and participation meetings will be arranged between communities and District Officers, NGOs/CBOs and the private sector representatives (for example service providers for agro-processing, micro finance, sustainable livelihoods and early warning information). The following training topics are proposed:

- Avoiding and Mitigating Environmental and Social Impacts in Community Planning;
- Establishing and enforcing Community Rules for Safeguards;
- Community Development Planning and Responsibilities;
- Defining Sustainable Development Projects;

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- Inclusion of Vulnerable Groups in Community Planning and Projects;
- Conflict Resolution in Community Decision Making; and
- Roles and Responsibilities of District Councils and Community in Safeguarding and Conflicts.

The participants will include community members and District Officers who will work in close collaboration with the communities in designing and formulating local land use plans.

7.2 SAFEGUARD CLAUSES FOR CONTRACTORS

Annex 8 gives the safeguards clauses that should be included in the contractor's contracts for small works.

8. GRIEVANCE REDRESS MECHANISM

8.1 POTENTIAL GRIEVANCES AND DISPUTES

Potential grievances and disputes that arise during the course of the implementation of the sub-projects and resettlement and compensation program may, for instance, be related to the following issues:

- Inventory mistakes made during census survey as well as inadequate valuation of properties;
- Mistakes related to identification and disagreements on boundaries between affected individual(s) and specifying their land parcels and associated development;
- Disagreements on plot/ asset valuation;
- Divorces, successor and family issues resulting into ownership disputes or disputes shared between heirs or family;
- Disputed ownership of a given asset (two or more affected individual(s) claim the same);
- Where affected individual(s) opt for a settlement-based option and there is disagreement on the resettlement package (the location of the resettlement site does not suit them);
- Dispute of alleged voluntary donation of land;
- Unfair award of contracts;
- Delayed payments to contractors;
- Delayed disbursement of Project funds;
- Long procurement procedures; and
- Delayed commencement of sub-project activities.

8.2 PROCEDURE

Despite best efforts with regard to the public consultation and community relations, there will be times when the Program sponsor and stakeholders disagree. All Program affected persons will be informed of their rights to raise grievances pertaining to the ZIFLP.

Mechanisms will be put in place to ensure that grievances are recorded and considered fairly and appropriately. These include:

- A register of grievances which will be held by the Community Liaison Officer or any other appointed person by the ICCS;
- Receipt of grievances will be acknowledged as soon as possible, by letter or verbal means;
- The grievance will be reviewed by the Compensation Committee and appropriate action will be implemented. The preferred course of action will be discussed with the person bringing the grievance. Wherever possible, grievances will be resolved at this level;

- Relevant details of grievances, with outcomes, will be made available to the affected parties through the ICCS, who will develop a communication strategy for the grievance redress mechanism for the Project, which should include an explanation of the methods used to carry out the Project's activities and compensation payments.

8.3 UNRESOLVED GRIEVANCES AND DISPUTES

Unresolved issues will be referred to a credible and independent person or body for arbitration. Where disagreements are severe, disputes could be resolved through community-recognized local institutions such as senior church officials, or other respected civil society figures.

There are three main ways in which grievances will be resolved, and these are discussed below.

Arbitration

The Arbitration Act makes provisions for aggrieved parties to agree to settle disputes out of court through arbitration. In order to use arbitration in the settlement of disputes, the parties ought to make a written agreement to submit a present dispute, or future disputes to arbitration. The parties are at liberty whether or not to name an arbitrator in the agreement. Where an arbitrator is not named in the agreement, the agreement should designate a person who would appoint an arbitrator.

Courts of Law

It should be noted that arbitration only works where the parties to a dispute agree to resolve a difference through arbitration. Where there is no consent, then a court of jurisdiction may be used to resolve a dispute.

Grievance Redress Committee

The Project will set up a grievance redress mechanism (GRM) building on both traditional conflict-resolution flows as well as administrative and Project based steps to ensure community members or any stakeholders have an opportunity and means to raise their concerns or to provide suggestions regarding Project-related activities. From the community to the national level, there will be focal persons to receive, record and address grievances, queries and suggestions.

A reporting line of received (and addressed) grievances will also be clearly defined, so that the ICCS (national level project unit) will have a full set of data. Complaints will be categorized and recorded at each level of the structure, and consolidated periodically in a national-level grievance database. The database will also be an effective management tool to monitor progress and detect potential obstacles in the Project implementation.

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During the participatory assessment process for sub-project preparation and sensitization sessions, the Project's GRM ("communication steps" for beneficiaries) will be explained so that all stakeholders are aware and encouraged to use the mechanism for transparency and better Project implementation. To better inform stakeholders, the Project will prepare materials (e.g., posters, leaflets) in a widely spoken local language and displayed in public accessed areas as part of the communication activities. More detailed plans on the GRM will be explained in the Project Implementation Manual (PIM).

The illustration in Annex 9 summarizes the procedure for grievances redress and outlines the entry points and decision-making at respective levels.

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ANNEXES

ANNEX 1: LIST OF STAKEHOLDERS CONSULTED

ANNEX 1.1: STAKEHOLDERS CONSULTED

- Chikomeni Community Farmers;
- Mwasemphangwe Community Farmers;
- Chinunda Community Farmers;
- Mwanja Community Farmers;
- Chitungulu Community Farmers;
- Mwanja Community Resource Board;
- Chitungulu Community Resource Board;
- Interim Climate Change Secretariat;
- Forestry Department – National level;
- Department of National Parks and Wildlife – National level;
- Ministry of Agriculture – National level;
- COMACO - Lusaka;
- ZEMA;
- BioCarbon Partners;
- East Luangwa Area Management Unit of the Department of National Parks and Wildlife Headquarters;
- Chikomeni Sector of the East Luangwa Area Management Unit of the Department of National Parks and Wildlife, which includes the Lukusuzi Park;
- Kasungu-Lukusuzi Component of the Malawi-Zambia Trans-Frontier Conservation Area;
- Provincial Forestry Officer, Eastern Province;
- District Forestry Officer, Chipata;
- District Forestry Officer, Lundazi;
- Chief Planner, Provincial Planning Unit – Eastern Province;
- COMACO, Chipata Hub;
- Provincial Agricultural Coordinating Officer – Eastern Province;
- District Agricultural Coordinating Officer, Chipata;
- District Agricultural Coordinating Officer, Lundazi;
- District Commissioner, Lundazi;
- District Chiefs and Traditional Affairs Officer, Lundazi;
- World Vision – Chikomeni Area Development Program;
- Cargill;
- NWK AGRI;
- Royal Establishments;
- Ward Councillors;
- Department of Cooperatives; and
- Eastern Province Round Table Members.

ANNEX 1.2: KEY ISSUES DISCUSSED DURING CONSULTATIONS

25/10/2016

Ministry of Agriculture – Moffat Khosa, Principle Agriculture Extension Officer

- Communities need to be empowered with value addition to their products;
- Need to mainstream environmental and social issues in all sectors;
- There is need to foster a participatory extension approach as the current system has a lot of gaps that need to be filled.
- Crop storage should be emphasized in productivity improvement programs as currently there is a lot of emphasis placed on productivity, but little on storage;
- Post-harvest losses due insect pests are high and this leads to food insecurity;
- There is a lack of capacity in most government institutions. The Project should therefore be implemented using existing structures in order to build capacity in the institutions
- Extension services are weak because the government allocation is very low, and it is often disbursed very late.

25/10/2016

Community Markets for Conservation (COMACO)

Dale Lewis

Japhet Seulu

Whiteson Daka

Nemiah Tembo

Samuel Penza

COMACO is implementing community conservation plans in 24 chiefdoms. The activities being undertaken include the following:

- **Climate-smart agriculture:** integrated soil fertility management; conservation agriculture – minimum tillage; agroforestry – fast growing species and drought resistant i.e. *Gliricidia sepium*; dam construction with guidelines of dos and don'ts; agro-processing; small scale poultry; small scale vegetable farming; community based conservation areas; promotion of agro-crops that are environmentally friendly and do not get rid of forest stands such as cereals and legumes; discourage crops that need farmers to clear huge pieces of land and utilize wood during processing; seed inputs banks-legumes and vegetables i.e. tomatoes and spices; environmental calendar to guide different seasons and possible calamities to be avoided e.g. fires, erosion, rain pattern – awareness information is aired on radio and through posters and leaflets; local leaders meetings on sensitization for rain patterns, agroforestry, markets and planning; compliance scoring of chiefdoms through stakeholder meetings to show case how each area is fairing in conservation agriculture and provision of feedback to chiefs for action; provision of markets driven by conservation efforts to get a better price i.e. premium price, which is the highest and below market price, which is the lowest; guide and sensitize communities on crops to embark on and solutions in areas in conflict with wildlife especially near the parks.
- **Sustainable forest management:** woodlot establishment – fast growing species i.e. *Gliricidia sepium*; community managed natural regeneration through community conservation areas and green zones; forest fire management; beekeeping (honey and bees wax) – use of modern bee hives and not bark hives; non-timber forest products e.g. fruits, mushrooms and bamboos; fuel efficient technologies – rocket cook stoves; Alternative energy sources –usage of briquettes made from groundnut shells and rice husks; community conservation plans – to guide the dos and don'ts; creation of community conservation areas with allowed practices

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clearly spelt out; adding value to non-timber forest products e.g. drying mushrooms and caterpillars and extraction of juice from fruits; restricting insecticide and pesticide use in order to preserve insect life; creation of better markets for non-timber forest products e.g. mushrooms and wild fruits; encourage gender participation in bee-keeping, tree planting and fire management; Adding value to the beauty of forests by creating lodges, bush camps and heritage sites; involving local leaders in planning, implementation, benefits sharing and challenges in management of the forests and communities such as cooperatives; carry out patrols with local leaders on the activities that are being discouraged and coming up with plans on how to deal with such issues.

- **Wildlife conservation and improvement of rural livelihoods:** involving chiefs; partnerships with other NGOs, fire management; reducing poaching- voluntary surrender of guns and snares; conservation incentives - markets, inputs and compliance assessments; creation of community conservation plans and green zones to govern conservation areas; continuous sensitization meetings, leadership with communities and their leaders; capacity building of community conservation leaders in governance, conservation and income generating activities; diversification of agricultural activities i.e. beekeeping, vegetable production and poultry; introduction of new technology in conservation i.e. rocket cook stoves to address habitat loss, agroforestry to supply fuel wood to stoves as an alternative to natural forests; production of impact stories that are aired on radios, relayed in leaflets and other publications e.g. transformation of poachers' lives.

26/10/2016

Kabinga Camp Conservation Area

Andrew Mbewe - farmer

Simon Mwale - farmer

Japhet Banda – principal farmer

Standwell Kamanga – lead farmer

- Creating community conservation areas and green zones with a view to achieving community managed natural re-generation.
- Establishing woodlots using fast growing species e.g. *Gliricidia sepium*.
- Livelihood enhancement activities are key to preventing the cutting down of trees. Activities being implemented include agroforestry, bee-keeping using modern bee-hives and not bark hives, use and the development of markets for non-timber forest products such as fruits, mushrooms and bamboos.
- Challenges faced include the illegal selling of land in conservation areas by the royal establishment. Once the land is allocated and put on title in a customary area, then it is difficult to prevent unsustainable activities at such a farm. There are too many people in the traditional hierarchy with powers to allocate land, and often land is allocated to people illegally at an illegal fee. There is need to restrict the practice of land allocation to only a few people in the royal establishment.

26/10/2016

Titukule Women's Club in Chikomani

Misozi Zulu

Gladys Mwanza

Beauty Nkata

Eliza Zimba

Involved in Poultry, bee-keeping, and management of a green zone where they will be able to harvest mushrooms and create a habitat that could eventually be used for eco-tourism.

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- The use of rocket stoves, which require only a small amount of firewood, means that they can spend less time collecting firewood;
- They do not need to collect logs of fire wood as twigs are sufficient for cooking;
- Twigs can be obtained from fry pieces of wood that have fallen off the trees naturally, as opposed to cutting down large trees and causing deforestation;
- Women do not have to travel long distances to collect large pieces of wood, and face the risks of being raped whilst they are own their own in the bush;
- Poultry activities are generating a steady income for the families. This allows them to buy essential goods and pay for their children’s schools and hospital bills.
- Overall, the use of rocket stoves results in the following benefits: use of less firewood; less smoke is generated improving the health and safety of women; reduced labor as a smaller amount of firewood has to be transported; reduces the chances of women being attacked by elephants, lions snakes; reduces the chances of women being raped as they do not have to go far to fetch the twigs; more energy efficient than conventional wood fires used for household cooking.
- Benefit sharing mechanism for the honey harvested from apiaries: Honey is currently sold at K1.20/kg; K0.70 is retained by the women club, whereas K0.50 is paid to the chief and his/her council of indunas as an incentive for the traditional authority’s support for the venture, and as a way of saying thank you to the chief in line with Zambian tradition norms.
- The apiaries are located in “Green Zones” in the Lukusuzi-Kasungu TFCA, which provide mushrooms, masuku and other fruits.
- The bees in the apiaries need water, but this is a challenge in the dry season as most streams in the area dry up.
- In long-term, the club hopes to create animal habitats in the “Green Zones” and venture into eco-tourism.

27/10/2016

Kenani Village Conservation Farm

John Phiri – Extension Manager

Simon Banda – Cook Stove Project

Samaria Zulu - farmer

- Most people in the area were involved in unsustainable activities such as sand excavation, cutting down trees (for charcoal, firewood and brick making), and poaching, but they are being persuaded to stop such activities as they are not sustainable.
- Conservation farming activities being encouraged and involve: crop rotation; minimum tillage; manure application; retention of crop residues; and fire management.
- A four year crop rotation cycle can be: groundnuts/ soya beans – maize – sunflower – cotton.
- Water availability is generally a problem, especially during the dry season as most streams in the area are ephemeral.
- Drought spells cause a reduction in yields in some years, and the loss of yields causes farmers to clear more land in the following season to make up for the losses. Therefore, agroforestry using the drought resistant *Gliricidia sepium* is being encouraged so that farmers stick to one homestead and avoid clearing more land and impacting on forests.
- Extension Officers are encouraging the use of *Gliricidia sepium* for agroforestry because it is fast growing, and drought resistant. In addition, it fixes nitrogen in the soil and its twigs can be used as firewood for the rocket stoves that are being promoted in the area. The flower part of the tree is a good source of pollen for foraging bees.
- It is estimated that the use of *Gliricidia sepium* for agroforestry has resulted in a 60% reduction in the use of fertilizers in the area.

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27/10/2016

Mwasemphangwe Evicted Illegal Lukusuzi National Park Settlers

Dawson Tembo (also Councillor of Diwa Ward)

Masauso Lungu

Enoch Mtonga

Edward Banda

- They settled in the Park in 2011 after the DNPW Camps in the Chinunda and Mwasemphangwe areas were closed down.
- They moved into the park in search of fertile agriculture land.
- The areas they settled in the Park are called Kamwankunku, Mbuluzi, Mnyamazi, Msikizi and Kamaibe. It was widely known that the place had been dormant for a long time. They settled in the Park with their families and had a park community with a social fabric that included a borehole and football field.
- Some evicted settlers claim that they bought the land in the park from an Induna (Chieftainess Mwasemphangwe's Adviser) – the individual fees paid were up to K10,000.
- There were 199 Zambian households and 15 Malawian households living in the Park, with a total population of 2,917 people.
- They were involuntarily evicted from the Park between 31 October 2015 and 4 November 2015.
- The evictions were not undertaken in accordance with good practice international standards i.e. the settlers were loaded in trucks, their housing units set on fire and dumped along the Chipata-Lundazi main road.
- When the community was evicted, they were promised that Government would make arrangements for the chief's in the areas where they originally came from to allocate them alternative land.
- However, land has not been allocated to any of them, and as a result their livelihoods have been severely destroyed.
- This is why they keep going back into the Park illegally.
- 2 people were found in the Park during the field work.

27/10/2016

Department of National Parks and Wildlife – Lukusuzi National Park

Moses Mbewe – Park Ranger

Mable Shibata - Park Ranger

- The General Management Plan for Lukusuzi Park needs updating.
- There is no buffer zone on the eastern side of the Park.
- Lukusuzi NP has an ecological connectivity with Kasungu NP in Malawi, and this linkage is being disturbed as a result of population increase. This in turn is resulting in human-wildlife-conflicts (HWCs).
- The rivers in the Park are seasonal, and the lack of water in the dry season triggers the movement of animals to areas outside the Park.
- Edge effects around the Park cause HWCs e.g. animals leaving the Park into human locations and people going into the Park to access fertile farm land and natural resources, and poach animals. Illegal settlement in the Park also introduce domestic animals into the Park, which results in HWCs as the wild animals raid the settlements for kill the domestic animals.
- Illegal activities in the Park include poaching, small scale mining and settlements. Illegal settlements were created in the Kamwankunku, Mbuluzi, Mnyamazi, Msikizi and Kamaibe

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areas of the Park, but all the illegal settlers, totaling 2,917 people were evicted by the DNPW last year (2015) in October and November.

- Some people went in illegally again, but were apprehended and the cases are in court.
- 7 families are reported to have gone in again, and these will also soon be evicted.
- In terms of Park Management, late wild fires are a constant problem that need to be managed.
- The Park is intact with a number of species, but capacity needs to be built e.g. fire breaks, road infrastructure, sensitization, buffer zones, staffing (currently only 10 out of a complement of 75 required staff), operational vehicles and equipment, watering holes, office and staff accommodation, water and sanitation in staff compound.
- The Park also has rock painting, caves and iron smelting artifacts of the late Stone Age.

28/10/2016

Chamukoma Camp Conservation Area

Steaby Zimba - farmer

Maganizo Chibambo - farmer

Betty Chunga - farmer

Andrew Banda - farmer

- Undertaking forest conservation activities within the framework of the Community Conservation Plan.
- The Community Conservation Plan consists of: Community Conservation Areas that have been zoned; general land and natural resources management needs and responsibilities; and conservation plan governance.
- Livelihood activities in the area include agroforestry, apiaries and gardening (cabbage, potatoes, bananas, chili peppers, tomatoes, okra, garlic, egg plants, Chinese cabbage, sugarcane, guavas, lemon, rape (spring greens), chibwabwa and bondwe).
- It was noticed that the gardens were too near the stream (a buffer zone is required in order to protect the stream) and that pesticides which are distributed to the farmers as part of the cotton input supplies (e.g. Fortis K50 EC supplied by Dunavant) were being used for vegetables. This could present a serious health and safety risk. In addition, no personal protective equipment were being used whilst handling the chemicals.
- The farmers in the area experience human-wildlife-conflicts, especially from monkeys and baboons from the Lukusuzi National park, which tend to feast on their bananas. To protect the bananas, the farmers cover the bananas with sacks.

03/11/2016

BioCarbon Partners (BCP)

Godfrey Phiri

- BCP is implementing REDD+ activities under the Community Forests Program (CFP) in the Lumimba GMA, specifically in Mwanja Chiefdom adjacent to the Lukusuzi national park, the South Luangwa National Park and Luambe National Park to the north.
- The aims of the CFP are: bringing 700,000 ha of intact and uninhabited community forests under agreement for Emissions Reduction; livelihoods development targeting 10,000 Households; and capacity development.
- The activities undertaken to date on the CFP include: chiefdom consultations for REDD+ implementation using participatory methodologies; seeking letter of consent/ support for CFP permission to proceed with Viability Assessments; participatory community mapping and identification rough boundaries of forest to be protected under REDD+; comprehensive data collection for Participatory Forest Management Plan (PFMP) Generation.

ZIFLP Environmental and Social Management Framework

- The forest selection process involves: participatory forest demarcation meetings in 5 village area groups (VAGs) of Mwanya; initially done using of Participatory Learning and Action (PLA) community mapping tools and techniques/ map sketches on the ground; drawing on chiefdom map using community mapping; collection of Key features data using GPS; group discussion of maps and validation by community members through several feedback meetings; and final draft map done and validated in all 5 VAGs.
- Validation of forests selected: “Flying Free Prior and Informed Consent (FPIC)” process; driving and ground-truthing to physically confirm/ clarify proposed Participatory Forest Management Areas (PFMA) boundaries; a total of 7 community VAG level consultative meetings have been conducted; facilitated by local community ambassadors, GRZ Forestry Department, Department of National Parks and Wildlife, Ministry of Chiefs and Traditional Affairs; and Ministry of Agriculture; using participatory learning and action methodologies and tools; culminating in the development of Participatory Forest Management Plans.
- Zonation of Participatory Forest Management Area: Conservation Forest (CF) (REDD+ “project area” intact forest; stays forest, through implementation of the terms of the PFMP; successful implementation results; long-term forest protection; performance-based revenue share payments to stakeholders and deforestation in the Conservation Forest is a breach of the PFMP); Sustainable Development Zone (SDZ) (area surrounding the Conservation Forest within the Chiefdom; settlement, agriculture, (sustainable) harvesting of resources and other development will take place according to a Sustainable Land Use Plan, which is to be collaboratively developed by key implementing partners and stakeholders in Mwanya Chiefdom; deforestation in the Sustainable Development Zone may take place; REDD+ project supports sustainable development and farmer support in the Sustainable Development Zone).
- Community activities have included: 3 (three) partnership impact projects (PIPs) have been implemented in Mwanya communities (a banana boat has been procured for the Lukusuzi community to help in the crossing of the Lukusuzi river during the rainy season, specifically in the Mukwela Village Action Group; furniture has been procured for the Yakobe Community Health Post; and at Mukasanga a Maternal Child health Annex is under construction and to be completed by 30th November); BCP have been conducting sensitization on REDD using Theater for Development; Assisted to form the CRB and a capacity assessment is being conducted for local governance structures for capacity building; community forest boundaries have been confirmed; and capacity is being built for Conservation Fees role out in the second quarter of 2017.
- Key milestones: forest selected and boundaries confirmed; needs assessment done; community consent letters given; official REDD+ start date letter given in relation to DNPW letter; and CFMG application to the Director - Forestry Department done pending response.

28/11/2016

Chitungulu Community Resource Board

Ray Chazangwe – COMACO Monitoring and Evaluation Officer

Joshua Banda – farmer

Matias Mvula – farmer

Nelson Phiri – Chitungulu Community Resource Board

Mike Sakala - Chitungulu Community Resource Board

- The Community Resource Board (CRB) activities include: village scouting; overseeing community infrastructure projects; forest resource management; forest conservation awareness; general natural resource awareness e.g. no use of poisons chemical when catching fish; blasting using gun powder to scare away animals; and managing community funds from hunting concessions and animal fees.

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- Animal fees – the community retains 50% and the DNPW gets 50%; 5% of the amount that the community retains is given to the chief.
- Hunting concession permit fees - the community retains 20% and the DNPW gets 80%.
- COMACO is teaching the CRB a lot of skills.
- Challenges: operational funds come late and are misused at time; To date K199,000 has not been received from government; no Personal Protective Equipment; sensitization meetings are only supported by COMACO – the DNPW does not support this activity; HWCs – a child was killed and eaten by a lion recently whilst sleeping at night; the CRB is unable to compensate for assets destroyed by animals, and therefore, gets a lot of abuse from the community; government does not help with blasting materials – only COMACO is helping; adjacent protected areas are getting encroached e.g. the Lundazi National Forest is heavily encroached along the Lundazi-Chitungulu Road.

28/11/2016

Mwanya Community Resource Board

Clement Phiri
Mendrick Phiri
James Tembo
Andsen Zimba

Activities include: village scouting; overseeing community infrastructure projects; forest resource management and forest conservation awareness.

They have employed 21 village scouts.

Challenges: no salaries have been paid for the last 6 months; no Personal Protective Equipment; no transport; no operational rations; area gets cut-off during the rainy season – a power boat is required.

29/11/2016

Eluhangeni Village, Lundazi

Abel Tembo

- Mr Tembo is part of an Energy for Agriculture pilot project in Lundazi District. He has invested in a 6m³ bio-gas plant that converts animal manure into combustible methane gas, which is also known as bio-gas. This clean energy source can be used by low income small scale farmers with no or unreliable access to electricity.
- The bio-gas can be used for domestic cooking and lighting, and reduces the need for traditional fuels and charcoal, which exhaust the environment and increase the workload of women and children. The gas is also more affordable than charcoal in the long run.
- The by-product, bio-slurry, is an organic fertilizer that can be used to increase agricultural production.

29/11/2016

Sustainable Integrated Land Management Solutions Project

Zaccheaus Mtonga
Mercy Lungu

- The goal of the SILMS Project is to develop a gender and business inclusive climate-smart agricultural business model that increases income generating opportunities in rural areas through the sustainable use of natural resources.
- The key aspects/ partners of the project are: integrated soil fertility management; agroforestry; deforestation-free supply chains; gender; input suppliers; processors/ traders; finance; agro-dealers; and farmers.

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- The project ends in 2018.

30/11/2016

Kakumba SNV Camp, Lundazi

Nevers Gondwe - farmer

Rachel Chunga - farmer

Kapwela Mwale - farmer

Chisala Melwa - farmer

- These farmers recognize that agriculture is a major driver of deforestation and are, therefore, involved in sustainable land management practices with the support of SNV, Netherlands Development Organization.
- Their activities include: integrated soil fertility management; agroforestry; deforestation-free supply chains; seed multiplication enterprises; tree nurseries; establishment of farmer associations for bulking purposes; and improved market access.

ANNEX 1.3: CONSULTATION REGISTER

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| 28/11/16 | CHIEF CHITUNGULU | | | |
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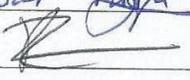
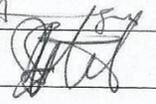
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ANNEX 2: ZAMBIAN POLICY FRAMEWORKS APPLICABLE TO THE ZIFLP

Vision 2030

The National Long Term Vision 2030 (Vision 2030) is Zambia's first ever written long-term plan, expressing Zambians' aspirations by the year 2030. It articulates possible long-term alternative development policy scenarios at different points, which would contribute to the attainment of the desirable social economic indicators by the year 2030. The Vision has been implemented through the five-year development plans starting with the Fifth National Development Plan (2006-2010) and annual budgets. This marks a departure from past practice of preparing and implementing medium-term plans that were not anchored on a national vision.

The Zambian people's vision is to become "A Prosperous Middle Income Nation by 2030". By 2030, Zambians, aspire to live in a strong and dynamic middle-income industrial nation that provides opportunities for improving the well-being of all, embodying values of socioeconomic justice, underpinned by the principles of: (i) gender responsive sustainable development; (ii) democracy; (iii) respect for human rights; (iv) good traditional and family values; (v) positive attitude towards work; (vi) peaceful coexistence and; (vii) private-public partnerships.

The key socio-economic development objective is to attain and sustain annual real growth of 10 percent between 2021 and 2030.

Revised Sixth National Development Plan

The Revised Sixth National Development Plan (R-SNDP) 2013-2016 is a medium term plan that was developed with a view to refocusing Government priorities and policies to be in line with the Patriotic Front development paradigm. It is an investment plan, which focuses on capital investment areas with a bias to rural development and job creation.

The plan identifies the main growth areas or sectors as Skills Development, Science and Technology, Agriculture, Livestock and Fisheries, Energy, and infrastructural development, particularly transport infrastructure, whilst enhancing the human development related sectors of Water and Sanitation, Education and Health. The other equally important sectors to stimulate rural development and job creation, which are mainly driven by the private sector such as Tourism, Manufacturing and Mining were to be implemented through the normal recurrent annual budget and Medium Term Expenditure Framework (MTEF). In addition, the Government also planned to put in place an appropriate policy environment for the sectors to thrive. The ultimate goal of the R-SNDP is to improve the quality of life for all Zambians.

Environmental Policy

The Policy's main aim is to promote sustainable environmental protection by providing a framework for the management of the environment and natural resources in order to protect future generations.

The Policy recognizes the relationship between widespread poverty and environmental degradation, since 62% of the population lives within the rural areas where dependence upon natural resources for livelihood is ever on the increase. This issue is compounded by the limited understanding of environmental problems, a weak administrative and legal framework

and a breakdown of traditional values and practices, which previously ensured a high degree of social responsibility and equitable sharing of resources within a natural equilibrium.

The National Policy on Environment is designed, therefore, to create a comprehensive framework for effective natural resource utilization and environmental conservation, which is sensitive to the requirements of sustainable development. According to the Environmental Management Act of 2011, section 21, the Policy or Action Plan needs to be updated every ten years.

National Parks and Wildlife Policy

The Policy sees wildlife as a renewable resource that has unique social, cultural and economic value that needs to be managed and preserved for sustainable development purposes and for the Zambian people. It also recognizes the economic value and role of wildlife conservation in promoting tourism and gives specific detail to how tourism activities in national parks and wildlife areas should be managed, including standards for tourism services and the level of fees to be charged. The Policy also acknowledges the role of local communities in managing wildlife and promotes the concept of CBNRM.

The Parks and Wildlife Policy of 1998 is currently under review so as to enable the formulation of regulations and approaches that create an environment that benefits biodiversity. It is hoped that Zambia's natural resources can be utilized in a sustainable manner so as to assist with poverty alleviation. Therefore, the new policy framework will result in the promotion of wildlife conservation and the preservation of the environment. The potential spin-offs are expected to be a rise in tourism, alleviation of poverty through job creation, an improvement in the protection of natural resources and a decrease in the human-wildlife conflicts that exist in rural areas.

Agriculture Policy

This Policy is intended to run from 2012 to 2030, and its core values include: equitable development of the agriculture sector to reduce food insecurity and poverty; stable and consistent interpretation and implementation of the agricultural policies, decisions and regulations; creation of economically sound agribusiness and public services opportunities; high ethical public sector and agribusiness standards; promotion of production to meet the changing needs and desires of domestic and international markets; sustainable utilization of the natural resources and the environment; efficient delivery of agricultural services.

Forestry Policy

The National Forestry Policy encourages participatory forest management, which is anchored on the active participation of local communities, traditional institutions, private sector and other stakeholders in the management and utilization of forest resources at all levels of decision making, implementation, monitoring and evaluation. The policy also encourages the definition of stakeholder roles, resource tenure, costs and benefit sharing mechanism related to forest resources management, investments and forest industries development.

The policy is, therefore, aligned within the framework of the decentralization policy of 2004, Zambia's Vision 2030 and the Revised Sixth National Development Plan. Furthermore, the Policy recognizes regional and international opportunities and obligations or frameworks such as the Southern Africa Development Community (SADC) protocols on forestry and other

natural resources, the Convention on International Trade in Endangered Species of Wild flora and fauna, Millennium Development Goals (MDGs), and forest related international conventions.

Energy Policy

The Energy Policy sets out Government's intentions in the energy sector that are aimed at ensuring that the sector's potential to drive economic growth and reduce poverty is harnessed. The policy is, therefore, a guide to policy makers, decision makers and development managers in the Government, the private sector, NGOs, civil society, on Government's intended actions in the energy sector.

Some of the key issues that have emerged from the policy review include the need to recognize the cross cutting nature of energy. For instance, critical social and economic services like health and education, transport and commerce cannot be efficiently and effectively provided in the absence of reliable and affordable energy services. The energy policy further takes account of important issues such as the high incidence of poverty, the HIV/AIDS pandemic, gender, environment and household energy, rural electrification and the role of bio-fuels in Zambia's future energy mix.

National Strategy to Reduce Deforestation and Forest Degradation (REDD+ Strategy)

The Strategy acknowledges that REDD+ is a global mechanism established under the United Nations Framework Convention on Climate Change (UNFCCC) to reduce emissions from tropical deforestation and degradation in developing countries. It is an incentive and performance based mechanism, which includes five activities namely, reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks.

The Strategy focuses on tackling different drivers of deforestation in both the forestry and other identified key sectors in particular, agriculture, energy, mining and infrastructure. The Vision of the Strategy is to contribute to a prosperous climate change resilient economy by 2030, anchored upon sustainable management and utilization of the nation's natural resources towards improved livelihoods. Its Goal is to contribute to national reductions in greenhouse gas emissions by improving forest and land management and to ensure equitable sharing of both carbon and non-carbon benefits among stakeholders. The REDD+ Strategy aims to reduce emissions in an effective, efficient, transparent and accountable way, and anchored on fairness and inclusiveness.

The Strategy is guided by seven core principles, namely, effectiveness, efficiency, fairness, transparency, accountability, inclusiveness and sustainability. A situation analysis as well as detailed studies on the main drivers of deforestation and forest degradation for Zambia, were a central component in the formulation of strategic objectives and interventions. The strategic objectives aim to effectively plan and manage forest resources for increased carbon storage, biodiversity conservation and improved flow of forest generated ecosystem services to local and urban livelihoods by 2030.

The ten strategic objectives of the National Strategy to Reduce Emissions from Deforestation and forest Degradation are:

- i. By 2030, threatened and unsustainably managed protected areas are effectively managed and protected to reduce emissions from deforestation and forest degradation and contribute to ecosystem services across selected landscapes;
- ii. By 2030, forests in open areas are effectively managed and monitored;
- iii. By 2030, all timber concession areas have management plans that are enforced and monitored with the full participation of local communities;
- iv. By 2030, good agricultural practices that mitigate carbon emissions are adopted;
- v. By 2030, regulated production of wood fuel (charcoal & firewood) and its improved utilization is in place;
- vi. By 2020, appropriate alternative energy sources are widely adopted;
- vii. By 2020, threatened and ecologically sensitive areas are legislated against extractive and infrastructure development;
- viii. By 2025, the mining industry contributes to the management of surrounding indigenous forests and the establishment of forest plantations for their own timber needs;
- ix. By 2025, integrated land use planning is in place; and
- x. By 2030, relevant institutions are capacitated to enable them to plan, manage, implement and monitor REDD+ initiatives.

The Strategy is to be implemented through a landscape approach at watershed level and through policy reforms at national level. It will take into account all land uses in a holistic way, including water and wildlife, and will work to lessen the competition for natural resources among different sectors. The approach ensures that the best possible balance is achieved among a range of different development objectives, including climate change mitigation and adaptation, environment and biodiversity conservation, enhanced economic productivity and improved livelihoods.

National Policy on Climate Change 2016

The goal of this policy is to support and facilitate a coordinated response to climate change issues in the country. It is aimed at enabling the country to re-align its climate sensitive sectors of the economy and its society in order to meet its developmental goals through adaptation and mitigation interventions.

National Climate Change Response Strategy

This National Climate Change Response Strategy (NCCRS) was developed to support and facilitate a coordinated response to climate change issues in the country. The Strategy enables Zambia to position itself strategically to respond to the adverse impacts of climate change and contribute to the achievement of the overall objective of the UNFCCC, which it ratified in 1993. Its objectives are as follows:

- Land Use (Agriculture and Forestry) - to develop sustainable land use systems to enhance agricultural production and ensure food security under the changing climate;
- Water - to ensure sustainable management and resiliency of water resources under the changing climate;
- Health and Social Infrastructure - to protect people and health from climate change and climate variability;
- Physical Infrastructure - to climate proof infrastructure;
- Transport - to develop a less carbon-intensive and climate change-resilient transport system;

- Energy - to develop a less carbon-intensive and climate change-resilient energy infrastructure and grow using low carbon path;
- Mining - to develop a less carbon-intensive and climate change-resilient mining industry;
- Governance - to develop an appropriate climate change governance (policy, legal and institutional) framework; and
- Mainstreaming - to mainstream climate change in all the key sectors of the economy.

To achieve the Vision, Mission and objectives, the Strategy establishes five core pillars for action and implementation of the strategy, namely, Adaptation and Disaster Risk Reduction, Mitigation and Low Carbon Development, Cross-Cutting Issues; Governance of Climate Change; and Finance and Investment Framework.

National Adaptation Program of Action

The National Adaptation Program of Action (NAPA) is meant to complement the efforts of the government to ensure that the livelihoods of the most vulnerable households are secured against the adverse impacts, risks and shocks as a result of climate change. The NAPA adaptation measures include:

- Adaptation of crops to climate change/ variability including promotion of early maturing/drought resistance crops;
- Develop sustainable and appropriate programs for both crops and livestock in the face of climate change;
- Water harvesting;
- Use of technologies for fertility improvement and moisture storage (including soil conservation measures);
- Improved fire management in game reserves;
- Identifying and protecting migratory routes of wildlife;
- Improved extension services to ensure sustainable land and forest management;
- Promotion of community forest management;
- Forest fire management at the community level;
- Targeting afforestation and reforestation programs to control siltation of streams and rivers as well as to provide fuel wood to minimize encroachment of the forests;
- Promotion of community woodlots for the provision of fuel wood and as sources of alternative cash income;
- Improving energy access and security, especially in rural areas (e.g., through the Rural Electrification Agency, promotion of energy-efficient stoves); and
- Restocking of depleted game areas.

National Biodiversity Strategy and Action Plan

The National Biodiversity Strategy and Action Plan (NBSAP) was revised in 2015 through a wide consultative process involving more than 500 stakeholders at national and provincial levels. The inputs from the consultations provided valuable information on national priorities for inclusion in the revised Strategy. Zambia's revised NBSAP covers the period 2015-2025, and its vision is: *"By 2025, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy environment and delivering benefits essential for all Zambians and the Zambian economy."*

Based on national and provincial prioritization exercises, the five strategic goals of the Convention on Biodiversity (CBD) Strategic Plan were considered highly relevant to Zambia, and these provide the overarching framework for the revised NBSAP. The Strategic Goals and Targets of Zambia's revised NBSAP are as follows:

- Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society;
- Reduce the direct pressures on biodiversity and promote sustainable use;
- Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity;
- Enhance the benefits to all from biodiversity and ecosystem services; and
- Enhance the implementation of the strategy through participatory planning, knowledge management and capacity building.

National Resettlement Policy

The National Resettlement Policy (NRP) sets out the Government objectives, principles and measures for dealing with resettlement as a strategy for rural development and as a response to internal population displacements. In addition, it provides a mechanism for dealing with both voluntary and involuntary resettlement. The policy focuses on employment creation, access to public social services, increased food security, security of land tenure, stimulating economic growth in rural areas and compensation and resettlement assistance for internally displaced persons.

Decentralization Policy

The main theme of the Decentralization Policy is 'Towards Empowering the People.' The Policy operationalizes Government's long term vision of achieving a fully decentralized and democratically elected system of governance characterized by open, predictable and transparent policy making and implementation processes at all levels of the public service. This process is centered on effective local community participation in decision-making and development administration, whilst maintaining sufficient linkages between the central and local government.

The decentralized structure comprises four levels, namely, National, Provincial, District and Sub-district. In this structure the Province will be streamlined because it is an important link between the centre and the district. The District will be the focus for development and service delivery, thus empowering local communities to play an effective role in national affairs. At the district level, there will be a system of Local Government based on democratically elected councils. The sub-district level will also be introduced.

In order to enhance the operations at National level, Cabinet Office, which is headed by the Secretary to the Cabinet, is expected to coordinate development activities through the National Development Coordinating Committee (NDCC). At provincial level, the PDCC, chaired by the Provincial Permanent Secretary, will coordinate the planning, implementation and monitoring of development activities.

The forum for coordinating the planning and implementation of development activities at the District level is the DDCC, which is either chaired by a Mayor or Council Chairperson. At sub-district level, there are wards, which are sub-structures of the councils for the purposes of Local Government Elections. The Registration and Development of Villages Act establishes the Ward Development Committees (WDCs) and Village Productivity Committees (VPCs) in each

ward as a forum for community participation in local development activities and affairs. The WDCs and the VPCs are also known as Area Development Committees (ADCs).

A parallel structure also exists at sub-district level, which consists of traditional rulers with their own administrative set up to govern their subjects in line with their traditional and customary law. This structure consists of Villages that are headed by Village Headmen.

ANNEX 3: ZAMBIAN LEGAL FRAMEWORKS APPLICABLE TO THE ZIFLP

Constitution of Zambia Cap 1

The Constitution of Zambia is the supreme law of Zambia and any other written law, customary law and customary practice that is inconsistent with its provisions is void to the extent of the inconsistency. It was amended in January 2016 by the Constitution of Zambia (Amendment) Act No. 2 of 2016.

Devolved Governance

The Act provides for the management and administration of the political, social, legal and economic affairs of the State to be devolved from the national government level to the local government level. The system of devolved governance that is recommended in the Act should follow the following principles: good governance, through democratic, effective and coherent governance systems and institutions; respect for the constitutional jurisdiction of each level of government; autonomy of the sub-structures; and equitable distribution and application of national resources to the sub-structures.

The district level local government functions prescribed in the Act include: administering the district; overseeing programs and projects in the district; making by-laws; and encouraging the involvement of communities and community organizations in matters of local government.

Land

The Constitution provides for land to be classified as State land, customary land and any other classification as prescribed. It also provides for land to be held for a prescribed tenure, and to be used and managed in accordance with the following principles: (a) equitable access to land and associated resources; (b) security of tenure for lawful land holders; (c) recognition of indigenous cultural rites; (d) sustainable use of land; (e) transparent, effective and efficient administration of land; (f) effective and efficient settlement of land disputes; (g) investments in land to also benefit local communities and their economy; and (h) plans for land use to be done in a consultative and participatory manner.

Article 16 of the Zambian Constitution provides for the protection from deprivation of property. More specifically, the Article states that “property of any description shall not be compulsorily taken possession of, and interest in or right over property of any description shall not be compulsorily acquired, unless by or under the authority of an Act of Parliament which provides for payment of adequate compensation for the property or interest or right to be taken possession of or acquired”.

The Article further provides that the Act of Parliament under reference shall provide that, in default of agreement on the amount of compensation payable, a Court of competent jurisdiction shall determine the amount of compensation.

Environment and Natural Resources

The Act provides for the utilization of natural resources and management of the environment in accordance with the following principles: (a) protection of genetic resources and biological diversity; (b) implementation of mechanisms that minimize waste; (c) promotion of appropriate environment management systems and tools; (d) encouragement of public participation; (e) protection and enhancement of the intellectual property in, and indigenous

knowledge of, biodiversity and genetic resources of local communities; (f) ensure that the environmental standards enforced in Zambia are of essential benefit to citizens; and (g) establish and implement mechanisms that address climate change.

Environmental Management Act of 2011

Overview

The EMA, which repealed and replaced the Environmental Protection and Pollution Control Act (EPPCA) No. 12 of 1990 Cap 204 of the Laws of Zambia, is the principal legislation on environmental management in Zambia. The EPPCA was the first comprehensive piece of legislation on environmental protection and pollution control. Under the Repealed Act regime, a number of secondary or subsidiary legislation was promulgated by the GRZ. These included the Water Pollution Control Regulations, 1993; the Waste Management Regulations 1993; the Pesticides and Toxic Substances Regulations 1994; the Air Pollution Control Regulations, 1996; the Environmental Impact Assessment Regulations, 1997; the Ozone Depleting Substances Regulations, 2001; and the Hazardous Waste Management Regulations, 2001.

The foregoing Regulations except for the Environmental Impact Assessment Regulations have since been revoked following the passing of the Environmental Management (Licensing) Regulations Statutory Instrument No. 112 of 2013.

The EMA makes provisions for integrated environmental management including the environmental impact assessment (EIA) of projects prior to implementation, strategic environmental assessment, declaration of an area of land that is ecologically fragile or sensitive to be an environmentally protected area, and the conservation of biological diversity and the fair and equitable sharing of the benefits arising out of the utilization of biological resources.

Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations of 1997

The guidelines and specific requirements for Environmental and Social Impact Assessment (ESIA) in Zambia are set out in the Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations of 1997, which were enacted under the repealed EPPCA of 1990. Section 30 of the EMA empowers the Minister responsible for environmental management to “make regulations for the effective administration of strategic environmental assessments and environmental impact assessments”. To date the new Environmental Management Act (Environmental Impact Assessment) Regulations have been drafted. However, these regulations have not been enacted, and therefore the 1997 EIA Regulations are still relevant.

The ZEMA, formerly Environmental Council of Zambia (ECZ), is the lead agency for environmental management, including EIAs, and is empowered through the EIA Regulations to identify projects, plans and policies for which EIAs are necessary. These regulations stipulate which types of projects require a Project Brief (First Schedule) and which require a full EIA study (Second Schedule).

Environmental Impact Assessment Process

An EIA is a thorough investigation of conditions within the environment of a proposed development or project area followed by an assessment of the impacts that the development

of the project will have on the environment in its totality i.e. physical, biological and socio-economic aspects. The purpose of conducting an EIA is to enhance the quality of a proposed development by ascertaining its environmental acceptability before it is approved for implementation.

The process for an EIA in Zambia follows three principal stages:

- The scoping study and development of the Draft ToR by the developer and the approval of the ToR and study team by ZEMA;
- The baseline studies, analysis of alternatives, assessment of impacts, development of mitigation measures and consultations; and
- Public consultation, review process and approval or modification of the project.

The ZEMA requires details of the qualifications of the EIA team and must approve the EIA team prior to the EIA phase, in particular baseline studies, being initiated. The Agency is also responsible for advertising the public disclosure of the EIA, and engaging with other governmental agencies.

ZEMA's Environmental Assessment Committee reviews EIA reports, known as Environmental Impact Statements (EISs), with the assistance of its Inspectorate Department. The decision is conveyed to the developer by way of a Decision Letter, signed by the Director General of ZEMA. Other regulatory agencies outside of ZEMA are also requested to review and comment on project briefs and EISs before the approval meeting is held.

Environmental Management (Licensing) Regulations of 2013

The Environmental Management (Licensing) Regulations of 2013 provide for a licensing regime for air and water pollution, waste management of both hazardous and non-hazardous waste, pesticides and toxic substances and ozone depleting substances.

Strategic Environmental Assessment

With regard to programs that could have an adverse effect on the environment or on the sustainable management and utilization of natural resources, the Act provides for the conducting of a strategic environmental assessment of the draft program and the submission of the strategic environmental assessment report to the ZEMA for approval. The proponent of the program "shall not adopt or implement" a program, which is not approved by the ZEMA. However, where any proponent considers that a program does not require a strategic environmental assessment, the proponent is required to submit a draft of the relevant document to the ZEMA for review and consideration.

Forests Act of 2015

The Forests Act establish the Forest Development Fund and provides for the:

- Establishment and declaration of National Forests, Local Forests, joint forest management areas, botanical reserves, private forests and community forests; Participation of local communities, local authorities, traditional institutions, non-governmental organizations and other stakeholders in sustainable forest management;

- Conservation and use of forests and trees for the sustainable management of forests ecosystems and biological diversity; and
- Implementation of the United Nations Framework Convention on Climate Change, Convention on International Trade in Endangered Species of Wild Flora and Fauna, the Convention on Wetlands of International Importance, especially as Water Fowl Habitat, the Convention on Biological Diversity, the Convention to Combat Desertification in those Countries experiencing Serious Drought and/or Desertification, particularly in Africa and any other relevant international agreement to which Zambia is a party.

In terms of community forest management, the Act provides for the formation of a CFMG for the purpose of communal control, use and management of a forest. Consent from the area chief is required and the group can consist of a group of persons who are: members of a village in or near a forest; managing a forest or part of a forest; or desirous of managing a forest or part of a forest.

The CFMG can enter into a community forestry agreement with the Forestry Department in respect of an area or forest for which the community forest management group is formed. Where a community resource board is already in existence, the group can also enter into a community forestry agreement with the department. A CFMG can, with the approval of the Director, enter into partnerships with other persons for the purposes of ensuring the efficient and sustainable conservation and management of the community forest.

In terms of user rights, a community forestry agreement may confer on a community forest management group the following forest user rights in the community forest concerned: (a) collection of medicinal herbs; (b) harvesting of honey; (c) harvesting of timber or fuel wood; (d) grass harvesting and grazing of animals; (e) collection of forest produce for community based industries; (f) eco-tourism and recreational activities; (g) scientific and educational activities; (h) plantation establishment through non-resident cultivation; and (i) the right to enter into contracts to assist in carrying out specified silvicultural operations;

Zambia Wildlife Act of 2015

The Wildlife Act provides enabling legislation for the sustainable management of wildlife in Zambia. In addition, the Act establishes the Department of National Parks and Wildlife and provides for the winding up of the operations of the Zambia Wildlife Authority. The functions of the Wildlife Management Licensing Committee are defined, in addition to providing for: the establishment, control and management of National Parks, bird and wildlife sanctuaries; the conservation and enhancement of wildlife eco-systems, biological diversity and objects of aesthetic, pre-historic, historical, geological, archeological and scientific interest in National Parks.

In terms of community partnerships, the Act provides for: the registration of community resources boards; the promotion of opportunities for the equitable and sustainable use of the special qualities of public wildlife estates; the establishment, control and co-management of Community Partnership Parks for the conservation and restoration of ecological structures for non-consumptive forms of recreation and environmental education; the sustainable use of wildlife and the effective management of the wildlife habitat in Game Management Areas; the development and implementation of management plans; and enhancement of the

benefits of Game Management Areas to local communities and wildlife through the involvement of local communities in the management of Game Management Areas;

The Act includes provisions for the regulation of the keeping, ranching, harvesting, hunting, and import and export of animals (including birdlife) and their products. It also covers the legal requirements for the control of illegal hunting or collection of wildlife during the construction process.

In addition, the Act provides for the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Convention on Wetlands of International Importance especially as Waterfowl Habitat, the Convention on Biological Diversity, the Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora.

Agricultural Lands Act Cap 187 of 2006

This Act establishes the Agricultural Lands Board, whose functions are to: keep under review the use that is being made of State Land outside urban and peri-urban areas; carry out other duties in connection with the alienation of State Land into farm development or settlement schemes; and make recommendations to the Minister. Under this Act, a lessee has the right to cut down and use indigenous trees on his holding as he may from time to time require for his own farming and domestic purposes, but he is not entitled, except with the prior approval of the President, to sell or move any timber from the holding.

Water Resources Management Act of 2011

The Water Resource Management Act provides for: the management, development, conservation, protection and preservation of the water resources and its ecosystems; and the equitable, reasonable and sustainable utilization of the water resource. The Act ensures the right to draw or take water for domestic and non-commercial purposes, and that the poor and vulnerable members of the society have an adequate and sustainable source of water free from any charges. In addition, it creates an enabling environment for adaptation to climate change and provides for the constitution, functions and composition of catchment councils, sub-catchment councils and water users associations.

National Heritage Conservation Commission Act, Cap 173 of 1989

The National Heritage Conservation Act establishes the National Heritage Conservation Commission (NHCC), and provides for the conservation of ancient, cultural and the natural heritage, relics and objects of aesthetic, historical, pre-historical, archaeological or scientific interest. Under the Act, any project being implemented is required to disclose any new archaeological, paleontological, or cultural sites it encounters to the NHCC and to follow their procedures for the investigation and/or removal of material from them prior to continuing construction activities.

Lands Act Cap 184

The Act repeals the Land (Conversion of Titles) Act and empowers the President of the Republic to compulsorily acquire property. The principles of compensation are pivoted on the basis that the value of property for the purpose of compensation shall be the value of the amount which the property might be expected to realize if sold on the open market by a willing seller at the time of the publication of notice to yield possession of the property.

Lands Acquisition Act Cap 189

Section 3 of the Lands Acquisition Act empowers the President of the Republic to compulsorily acquire property, whilst sections 5 to 7 provide for the issuing of notices to show the intention to acquire, notice to yield up property and to take up possession. Section 10 of the Act provides for compensation as consisting of such moneys as may be agreed from moneys appropriated for the purpose by Parliament. Furthermore, this section provides that where the property to be compulsorily acquired is land, the President, with the consent of the person entitled to compensation shall in lieu or in addition to any compensation payable under the section, grant other land not exceeding the value of the land acquired.

Under the Lands Acquisition Act, the value of the property for purposes of compensation shall be the value of the amount, which the property might be expected to realize if sold on the open market by a willing seller at the time of the publication of the notice to yield up possession of the property. Section 11 of the Lands Acquisition Act provides for the settlement of the disputes relating to the amount of compensation in the High Court.

Part VI of Act provides for the establishment of Compensation Advisory Board to advise and assist the Minister in the assessment of any compensation payable under the Act. Other functions of the board, its operations and constitution are also prescribed in the Act.

Local Government Act, Cap 281

This Act provides for the system of local government administration in Zambia at city, municipality and district council levels. Each level has delegated statutory functions with respect to development planning and participatory democracy.

The GRZ expects to devolve the powers of national government to local government in 2017. This will require: autonomy of the local government structures at both district and sub-district; equitable distribution and application of national resources to the sub-structures; and the involvement of communities and community organizations in matters of local government.

Urban and Regional Planning Act of 2015

This Act repeals the Town and Country Planning Act of 1962 and the Housing (Statutory and Improvement Areas) Act of 1975 and provides for: development, planning and administration principles, standards and requirements for urban and regional planning processes and systems; a framework for administering and managing urban and regional planning; a planning framework, guidelines, systems and processes for urban and regional planning; establishment of a democratic, accountable, transparent, participatory and inclusive process for urban and regional planning that allows for involvement of communities, private sector, interest groups and other stakeholders in the planning, implementation and operation of human settlement development; functional efficiency and socio-economic integration by providing for integration of activities, uses and facilities; establishment of procedures for integrated urban and regional planning in a devolved system of governance so as to ensure multi-sector cooperation, coordination and involvement of different levels of ministries, provincial administration, local authorities, traditional leaders and other stakeholders in urban and regional planning; sustainable urban and rural development by promoting environmental, social and economic sustainability in development initiatives and controls at all levels of urban and regional planning; and uniformity of law and policy with respect to urban and regional planning.

Arbitration Act No. 19 of 2000

This Act provides for arbitration in cases where the land owner/occupier does not agree with the amount of compensation being offered. Under section 12 (2) of the Act, the parties to arbitration are free to determine the procedure for appointing the arbitrator or arbitrators. Section 12 (3) (b) states that if the parties are unable to agree on the arbitration, another arbitrator shall be appointed, upon request of a party, by an arbitral institution.

Land Survey Act Cap 188

The Land Survey Act provides for the surveying of lands and properties before they are numbered, allocated and registered.

Valuation Surveyors Act Cap 207

This Act provides guidance for the valuation practice in Zambia and the requirement that for one to practice as a land valuator, he is supposed to be registered under the provisions of this Act by the Valuation Registration Board.

ANNEX 4: INTERNATIONAL AGREEMENTS APPLICABLE TO THE ZIFLP

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

The Convention was ratified in 1975 and its main objective is the protection of endangered species prominent in international trade. It is administered through appropriate trade control measures and monitoring the status of relevant species.

Convention on Biological Diversity

Ratified in 1995, the aim of the CBD is to effect international cooperation in the conservation of biological diversity and to promote sustainable use of living natural resources worldwide. It also aims to bring about the sharing of the benefits arising from the utilization of natural resources. The proposed program must conserve habitats as well as habitat corridors so as to ensure biological diversity. It is essential that the resources management plans to be developed by the ZIFL-P deal with such aspects to ensure habitat diversity as well as local communities continuing to benefit from the utilization of natural resources.

United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change was ratified in 1997, but was signed by 154 governments in Rio de Janeiro during the United Nations Conference on Environment and Development (UNCED) in June 1992. The convention addresses the threat of global climate change by urging governments to reduce the sources of greenhouse gases. The ultimate objective of the convention is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the world climatic system. The ZIFLP is being implemented within the framework of a REDD+ program.

Kyoto Protocol to the United Nations (Framework Convention on Climate Change)

Zambia signed the Kyoto Protocol in 2005. The Protocol is designed to further reduce greenhouse gas emissions by enhancing the national programs of developed countries. This is achieved by establishing percentage reduction targets.

United Nations Convention to Combat Desertification

The United Nations Convention to Combat Desertification (UNCCD) was ratified in 1997 and it is designed to combat desertification in those countries experiencing serious drought and/or desertification, particularly in Africa.

Ramsar Convention

The Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat was ratified in 1975 with the broad aims of stemming the loss and promoting the wise use of all wetlands.

Wetlands are areas where water is the primary factor controlling the environment and the associated plant and animal life. They occur where the water table is at or near the surface of the land, or where the land is covered by shallow water.

The Ramsar Convention takes a broad approach in determining the wetlands which come under its mandate. Under the text of the Convention (Article 1.1), wetlands are defined as: "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine

water the depth of which at low tide does not exceed six meters”. In addition, for the purpose of protecting coherent sites, the Article 2.1 provides that wetlands to be included in the Ramsar List of internationally important wetlands: “may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six meters at low tide lying within the wetlands”. Five major wetland types are generally recognized:

- Marine (coastal wetlands including coastal lagoons, rocky shores, and coral reefs);
- Estuarine (including deltas, tidal marshes, and mangrove swamps);
- Lacustrine (wetlands associated with lakes);
- Riverine (wetlands along rivers and streams); and
- Palustrine (meaning “marshy” – marshes, swamps and bogs).

In addition, there are human-made wetlands such as fish and shrimp ponds, farm ponds, irrigated agricultural land, salt pans, reservoirs, gravel pits, sewage farms and canals. The Ramsar Convention has adopted a Ramsar Classification of Wetland Type, which includes 42 types, grouped into three categories: Marine and Coastal Wetlands, Inland Wetlands, and Human-made Wetlands.

The convention addresses one of the most important issues in Southern Africa, namely the conservation of the countries’ water resources through the sustainable use of natural and human environments.

Wetlands provide a range of services, functions, and products that have direct social, economic and cultural value and are integral to the survival and well-being of communities. These systems have indispensable ecological value, being repositories of biodiversity and providing essential life support for a range of plant and animal species. The conservation and wise use of all wetlands is, therefore, in the national interest.

African Convention on the Conservation of Nature and Natural Resources

Conferences on this Convention were held in Algiers in 1968 and in Maputo in 2003. The aim of the convention is to encourage individual and joint action for the conservation, utilization and development of soil, water, flora and fauna for the present and future welfare of mankind, from an economic, nutritional, scientific, educational, cultural and aesthetic point of view.

Convention Concerning the Protection of the World Cultural and Natural Heritage

This Convention was ratified in 1972, and its objective is the protection and continuity of cultural and natural heritage.

Stockholm Convention on Persistent Organic Pollutants

The objective of this Convention is to protect human health and the environment from persistent organic pollutants (POPs) by prohibiting, phasing out as soon as possible, or restricting the production, placing on the market and use of substances, with a view to eliminating where feasible as soon as possible, releases of such substances, and by establishing provisions regarding waste consisting of, containing or contaminated by any of these substances. The convention was ratified in 1979.

The Stockholm Convention’s “Dirty Dozen” chemicals are Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Hexachlorobenzene, Mirex, Toxaphene, Polychlorinated biphenyls (PCBs), Dichlorodiphenyltrichloroethane (DDT), Dioxins, and Polychlorinated dibenzofurans.

Cartagena Protocol on Bio-safety to the Convention on Biological Diversity

The objective of this Convention is to ensure an adequate level of protection for the transfer, handling and use of genetically modified organisms (GMOs) that may have adverse effects on the environment and human health. The focus is on trans-boundary movements.

Protocol on Wildlife Conservation and Law Enforcement of the Southern African Development Community

Zambia ratified this Protocol in 1999. The Protocol is designed to ensure that the regional management of wildlife and wildlife products promotes awareness of the socio-economic value of wildlife. It also focuses on equitable distribution of the benefits derived from the sustainable use of wildlife.

Under this Protocol, wildlife is defined as animal and plant species occurring within natural ecosystems and habitats.

Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora

The objective of this agreement is to reduce and ultimately eliminate illegal trade in wild fauna and flora and to establish a permanent Task Force for this purpose. It was ratified in 1994.

ANNEX 5: FIRST SCHEDULE AND SECOND SCHEDULE OF THE EIA REGULATIONS

ANNEX 5.1: FIRST SCHEDULE

Projects

Urban area rehabilitation.
Water transport.
Control schemes.
Exploration for and production of hydrocarbons including refining and transport.
Timber harvesting and processing in forestry.
Land consolidation schemes.
Mining and mineral processing, reduction of ores, minerals, cement and lime kilns.
Smelting and refining of ores and minerals.
Foundries.
Brick and earthen manufacture.
Glass works.
Brewing and malting plants.
Plants for manufacture of coal briquettes.
Pumped storage schemes.
Bulk grain processing plants.
Hydro power schemes and electrification.
Chemical processing and manufacturing.

Others

Resettlement schemes.
Storage of hydrocarbons.
Hospitals, clinics and health centers.
Cemetery designation.
Touring and recreational development in national parks or similar reserves.
Projects located in or near environmental sensitive areas such as:

- Indigenous forests;
- Wetlands;
- Zones of high biological diversity;
- Areas supporting populations of rare and endangered species;
- Zones prone to erosion or desertification;
- Areas of historical and archaeological interest;
- Areas of cultural or religious significance;
- Areas used extensively for recreation and aesthetic reasons;
- Areas prone to flooding and natural hazards;
- Water catchments containing major sources for public, industrial or agricultural uses; and
- Areas of human settlements (particularly those with schools and hospitals).

ANNEX 5.2: SECOND SCHEDULE

Urban Development

Designing of new townships, which are more than 5Ha or more, or sites covering 700 dwellings and above.
Establishment of industrial estates.
Establishment or expansion of recreational areas such as golf course, which would attract 200 or more vehicles
Shopping centers and complexes - 10, 000 m² and above, floor area.

Transportation

All major roads outside urban areas, the construction of new roads and major improvements over 10 Km in length or over 1 Km in length if the road passes through a national park, Game Management Area.
Railway lines: 10 Km from built up area.
Airport and airfields; runaway 1, 800 m or more.
Pipelines: for water, diameter 0.5 m and above and length 10 Km outside built up area, for oil 15 Km or more of which 5 Km or more of their length will be situated in a protected area, a serious polluted water abstraction area.
Establishment or harbors or pontoons areas.

Dams, Rivers and Water Resources

Dams and barrages: covering a total of 25 Ha or more.
Exploration for, and use of, ground water resources including production geothermal energy: water to be extracted to be more than 2 million cumecs m³/s.

Mining: Including Quarrying and Open Cast Extraction

Copper mining, coal site.
Limestone, sand, dolomite, phosphate and clay extraction's of 2Ha or more.
Precious metals (silver, zinc, cobalt, nickel).
Industrial metals.
Gemstones.
Radioactive metals.

Forestry Related Activities

Clearance of forestry in sensitive areas such as watershed areas or for industrial use 50Ha or more.
Reforestation and afforestation.
Wood processing plants - 1, 000 tons or more.

Agriculture

Land clearance for large scale agriculture.
Introduction and use of agrochemical new in Zambia.
Introduction of new crops and animals especially exotic ones new to Zambia.
Irrigation schemes covering an area of 50 Ha or more.

Fish farms: production of 100 tons or more a year.
Aerial and ground spraying

Processing and Manufacturing Industry

Cement works and lime processing - 1, 000 tons or more a year.
Fertilizer manufacturing or processing - 1, 000 tons or more a year.
Tanning and dressing of hides and skins - 1, 00 skins a week.
Abattoirs and meat processing plants - 20, 000 carcasses and above a month.
Fish processing plant - more than 100 tons a year.
Pulp and paper mills - daily output 50 air dried tons and above a day.
Food processing plants - 400 tons or more output a year.

Electrical Infrastructure

Electricity generation station.
Electrical transmission lines - 220 Kv and more than 1 Km long.
Surface roads for electrical and transmission lines for more than 1 Km long.

Waste Disposal

Sites for solid disposal: construction of permanent disposal site with 1, 000 tons and above a day.
Sites for hazardous disposal 100 tons or more a year.
Sewage disposal works - with capacity of 15, 000 liters or more a day.

Nature Conservation Areas

Creation of national parks, game management areas and buffer zones.
Commercial exploitation of natural fauna and flora.
Introduction of alien species of flora and fauna to local ecosystems.

ANNEX 6: ZIFLP SCREENING CHECKLIST FOR ENVIRONMENTAL AND SOCIAL ISSUES

| 1. Project Information: Name and Contact Details: | | | |
|---|---------------------------------------|---------------------------|--|
| Project Name | Location: (province/district/village) | | |
| | If other, explain: | | |
| FSD District Focal Point | | | |
| Name of reviewer: | | Date of screening: | |

| Subproject Details: Attach location map (longitude – latitude coordinates (GPS reading) if available): | |
|--|---|
| Type of activity: <i>What will be done, who will do it, what are the objectives and outcomes</i> | |
| Estimated Cost: | |
| Proposed Date of Commencement of Work: | |
| Expected Completion of Work | |
| Technical Drawing/Specifications Reviewed: | Yes/No – refer to Application Portfolio |

| 2. Physical Data: | Comments |
|--|----------|
| Subproject Site area in ha | |
| Existing landuse in area | |
| Extension of or changes to existing land use | |
| Any existing property to transfer to subproject | |
| Any plans for construction, movement of earth, changes in land cover | |
| Number of households involved or affected by subproject | |

| 3. Preliminary Environmental Information: | Yes/No | Refer to Process Framework | Comments |
|--|--------|----------------------------|-------------------------|
| Is there adjacent/nearby critical natural habitat? | | | |
| Are there activities in Forest Reserve, National Park? | | | |
| Is there activity adjacent to Forest Reserve, National Park? | | | |
| What is the land currently being used for? (e.g. agriculture, gardening, etc.) | | | List the key resources. |

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| | | | |
|--|--|---|---------------------------------------|
| Will the proposed activities have any impact on any ecosystem services, biodiversity issues or natural habitats? | | | |
| Will there be water resource impacts? | | | |
| Will there be soil impacts? | | | |
| Will the subproject require use of pesticides? | | | If Yes, refer to Pest Management Plan |
| Are there any new or changing forest or park management planning or activities? | | ✓ | |

| 4. Preliminary Social and Land Information: | Yes/No | Refer to Process Framework | Comments |
|---|---------------|---|-----------------|
| Has there been litigation or complaints of any environmental nature directed against the proponent or subproject? | | ✓ | |
| Will the subproject require the acquisition of land? | | 1.0 | |
| What is the status of the land holding (customary, lease, community lands, etc)? | | ✓ | |
| Is there evidence of land tenure status of farmers and/or occupants (affidavit, other documentation)? | | ✓ | |
| Are there outstanding land disputes? | | ✓ | |
| Has there been proper consultation with stakeholders? | | ✓ | |
| Is there a grievance process identified for PAPs and is this easily accessible to these groups/individuals? | | ✓ | |
| Will there be any changes to livelihoods? | | ✓ | |
| What are the main issues associated with farmer benefits and community benefits? | | ✓ | |
| Will any restoration or compensation be required with "admitted" farmers? | | ✓ | |
| Will the project potentially involve an influx of workers to the project location? | | If yes, refer to WB guidance on labour influx | |
| Any cultural heritage/sacred sites in project area? | | ✓ | |
| Will there be restrictions or loss of access to using natural resources in any traditional areas including | | ✓ | |

| 5. Social equity and participation | Comments |
|---|-----------------|
| Who will participate in the project activities? | |
| Who are the vulnerable groups amongst the stakeholders? (e.g. landless/land-poor, elderly etc.) | |
| What is the gendered nature of the resource use and access in the project area? | |
| Identify constraints that may limit participation from specific groups or individuals | |

| | |
|---|--|
| How would current resource allocation change under the project? | |
| What are potential social risks that may be triggered by project activities? (short-medium-long term) | |

5. Impact identification and classification:

When considering the location of a subproject, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate or manage potential effects. The following table should be used as a reference.

| Issues | Site Sensitivity | | | Rating (L,M,H) |
|---|---|---|---|---|
| | Low | Medium | High | |
| Natural habitats | No natural habitats present of any kind | No critical natural habitats; other natural habitats occur | Critical natural habitats present; within declared protected areas | If High Refer to ZEMA |
| Water resource availability and use | Water flows exceed any existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues | Water flows balanced with existing demand | Water demand exceed existing flows | |
| Water use | Low intensity of water use; potential water use conflicts expected to be low | Medium intensity of water use; multiple water users; moderate potential water use conflicts | Intensive water use; multiple water users; potential for conflicts is high | |
| Water quality | No potential water quality issues | Water quality issues are important | Water quality issues are critical | If High Refer to ZEMA |
| Natural hazards vulnerability, floods, soil stability/ erosion | Flat terrain; no potential stability/ erosion problems; no known flood risks | Medium slopes; some erosion potential; medium risks from floods | Mountainous terrain; steep slopes; unstable soils; high erosion potential; flood risks | |
| Land and Farming Tenure | No conflicts, disagreements around use of land, tenant farmer rights and location of admitted farms and farmers transparent | Process of land regularization and rights to natural resources being worked out with clear communication and grievance process in place | Land conflicts historically unresolved, admitted farmers being evicted, tenant farmers losing rights and no transparency or grievance redress available | If Medium or High Refer to Process Framework |

6. Environmental and Social assessment comments based on site visit:

Summary Observations

Determination of screening category based on findings of the screening: A____B____C _

| |
|--------------------------|
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |

Requires an EIA

Requires preparation of additional E&S information

Does not require further environmental or social due diligence

Prepared by:

Date:

ANNEX 7: ZIFLP ABBREVIATED PEST MANAGEMENT PLAN

Purpose of the Abbreviated Pest Management Plan

The purpose of this APMP is to provide guidance on the management, registration and screening of pesticides that is available in Zambia for ZIFLP activities. The PMP will contribute to improved pest management, personal safety and environmental sustainability. A preferred solution is to use Integrated Pest Management (IPM) techniques and encourage their use in the whole of the sector concerned. Under Pest Management OP 4.09, the Bank uses various means to assess pest management in the country and support IPM and the safe use of agricultural pesticides. In Bank-financed agriculture operations, pest populations are normally controlled through IPM approaches, such as biological control, cultural practices, and the development and use of crop varieties that are resistant or tolerant to the pest. The Bank also supports projects that procure or purchase pesticides when their use is justified.

The basis of this APMP is the recent Agribusiness and Trade Policy Project that supports investment activities that may require the procurement of farming inputs such as fertilizers, pesticides and fungicides to support the agro-sector. This project was approved at the end of 2016 and is of recent and pertinent value to the ZIFLP. Because ZIFLP is also rolling out its program with line Ministries such as the Ministry of Agriculture, the relevant extension officers at the Provincial and District levels will be consulted when issues arise about pesticide use. The screening form used for all subprojects for ZIFLP identifies pesticides and agrochemicals are expected to be used, and as such will warrant such consultation.

Principles and Objectives of the APMP

Since the Bank Policy 4.09 on Pest Management has been triggered, a Pest Management Plan to provide guidance for the screening of pesticides, fertilizers, and other chemicals and their safe handling and disposal, has been requested. The specific objectives of this APMP are to:

- 1) Promote ecologically based Integrated Pest management (IPM) and reduce reliance on synthetic pesticides;
- 2) Reduce health and environmental risks.

ZIFLP Activities and Pesticides

ZIFLP's agriculture activities and the adoption of new climate smart agriculture technologies could result in increased usage of agrochemicals by farmer beneficiaries. However, given the small-scale nature of activities, a significant increase in pesticide use is unlikely and possible procurement of pesticides would be minor. ZIFLP Component 2 will finance on-the-ground activities that improve rural livelihoods and reduce GHG emissions. It has 3 subcomponents that may involve pesticide use: Upscaling climate-smart agricultural practices, Community-based forestry management, and Wildlife management. Under upscaling climate-smart agricultural

practices, the Agroforestry subcomponent, trees in the farming system will be used to increase farm incomes and diversity production. The project will support the integration of tested tree species with crop production in the targeted districts of Eastern Province. This subcomponent will support nurseries, the procurement of saplings, managing naturally-regenerated trees on crop fields, woodlots, enhance access to improved seeds and other inputs through support to community agro-dealers as well as other activities that generally use pesticides. The Program supports supplies and equipment for nurseries and other activities which may include pesticides as part of an Integrated Pest Management (IPM) approach. Further details on other Program activities that generally involve pesticides as a regular part of activities that are usually financed by non-Program sources can be found in the general text of the ESMF.

ZILP Approach and Procedures for Pesticide Management

The Program will take a two-pronged approach to managing pesticide related concerns. In the first group, subproject activities that generally use pesticides as part of normal and regular operations but do not support large scale procurement of pesticides using Program funds. In the second group are activities that may use Program funds to procure pesticides such as the nurseries for forest production, reforestation, afforestation etc. For activities in Group 1, the general approach will be to:

- Provide training in the safe handling and storage of agro-chemicals which will include information on restricted pesticides and IPM.
- Monitor and follow-up generally during field visits on pesticide related issues (use of personal protective equipment [PPE], proper storage and labeling, any pollution issues and natural habitats, etc.).

For Group 2 activities which may use Program funding to procure pesticides:

- ZILP Environmental Officers will supply the lists of permitted and prohibited pesticides to sub-project implementers.
- Project Executors can only obtain pesticides from ZEMA licensed entities.
- ZILP Environmental Officers will ensure that such activities will be closely monitored throughout implementation using field visits and the like to ensure that only allowed pesticides are being procured and used in Program activities including verifying that only ZEMA licensed suppliers are used to obtain pesticides.
- Training will be provided to such Program activities implementers (nursery staff, Park staff) on the safe handling and storage of agro-chemicals which will include information on restricted pesticides and IPM.

Screening Mechanism for Pesticides

The Bank policy on Pest Management in Zambia is complimented by ZEMA, who is the competent authority responsible for; the screening of approved and banned pesticides, registration guidance on storage and disposal of pesticides. Their mandate is supported by the Environmental Management Act (EMA), 2011 and Environmental Management (Pesticides) Regulations of 2013. Furthermore, Zambia is a signatory to international bodies such as the Rotterdam Convention. In accordance with OP 4.09, the following criteria will apply to the selection and use of pesticides for the project:

- They must have negligible adverse human health effects;
- They must be shown to be effective against the target species;
- They must have minimal effect on non-target species and the natural environment. The methods, timing, and frequency of pesticide application are aimed to minimize damage to natural enemies. Pesticides used in public health programs must be demonstrated to be safe for inhabitants and domestic animals in the treated areas, as well as for personnel applying them;
- Their use must take into account the need to prevent the development of resistance in pests;
- The Project will not procure or support use of Class I or II (WHO) pesticides.

Any pesticides used in connection with the project will be manufactured, packaged, labelled, handled, stored, disposed of, and applied according to standards acceptable to the Bank. The Bank does not finance formulated products that fall in WHO classes IA and IB, or formulations of products in Class II, if (a) the country lacks restrictions on their distribution and use; or (b) they are likely to be used by, or be accessible to, lay personnel, farmers, or others without training, equipment, and facilities to handle, store, and apply these products properly. Given the fact that farmers or others without proper training, equipment and facilities for proper pesticide management are likely to have access to such pesticides, the Project will not procure or support use of Class II (WHO) pesticides. Only pesticides that are legally authorised and meet the above criteria will be supported or procured in the Program.

The Eastern Province (EP) Provincial Project Unit (PPU) and Interim Climate Change Secretariat (ICCS) Environmental and Social Officers will oversee most of the activities, which may use pesticides: climate-smart agricultural practices, Community-based forestry management, and wildlife management subcomponents. A screening mechanism will be operationalized by the PPU as follows for all activities and investments: During the implementation phase of the project the screening will be incorporated as part of the assessment process of subproject activities and beneficiaries. Once the PPU receives a proposal from beneficiaries and sub-projects, screening will be undertaken to determine if. Once it has been established that pesticides are directly or indirectly going to be used or procured on an activity or investment, an **Integrated Pest Management Plan Checklist** (to be developed) will be used to monitor and record the progress of these activities. ZILP PPU will inform such subprojects (especially the livelihood investments and all other relevant activities) of which pesticides are allowable under the Program. Tables 2 and 3 contain information on these pesticides (which are commonly used and which are restricted). ZILP Program officials will use the tables to inform participating subproject activities well in advance

of on the ground activities and procurement activities on which types of pesticides are allowable in the Program especially for the nurseries and the wildlife component (if the Lukusuzi National Park plans to procure some pesticides to be used in an Integrated Pest Management approach (IPM)). If necessary, the PPU or relevant District will engage the Pest and Toxic Substance (PTS) unit at ZEMA and the Bank where applicable to establish if the pesticide is authorized according to the Bank and national legal criteria. If the Program activity does not know exactly which pesticides will be used, the Project implementers will be given Tables 1 and 2 with the understanding that the Program does not finance pesticides that are restricted or banned. Environmental and Social Officers and other ZILP Project authorities will use the **IPM Plan Checklist** and field visits during project implementation to follow-up on pesticide related activities to ensure that only allowed pesticides are being used. All pesticide suppliers to sub/projects or beneficiaries are required to hold a valid license with ZEMA. The PTS unit provides best practices for storage and disposal of chemicals. A PMP will be prepared by a qualified pest management specialist and submitted to the PIU by every sub-project/beneficiary where a significant (as determined by DPIU and ICCS) amount of pesticides will be used or if there is some reason for significant pest management concerns. The PMP will: consider IPM approaches; include appropriate training, storage, handling and disposal methods for any pesticide application; site specific safeguards; and will include mechanisms to monitor pesticide effects.

Pesticide Use

General Considerations

A variety of pesticides are available on the market, however, some pesticide are not supposed to be procured or used because they are either classified Ia (**Extremely hazardous**) and Ib (**Highly hazardous**), phased out or restricted on the WHO listing. Since project activities, potential investments and beneficiaries have not yet been defined, and the exact pesticides suitable for the project are yet to be defined.

ANNEX 8: CONTRACTOR'S SAFEGUARDS CLAUSES

These Environmental Rules for Contractors are prepared for all the contractors to be engaged for any ZIFLP civil works construction activities. The rules include provisions for proper management of construction sites, safe storage of construction materials and safe disposal of wastes.

General Considerations

- The contractor shall, in all his activities ensure maximum protection of the environment and the socio-economic wellbeing of the people affected by the project, whether within or outside the physical boundaries of the project area.
- Before any construction works begin, the contractor shall ensure that the relevant environmental and land acquisition certificates of authorization for the works have been obtained from Zambia Environmental Management Authority.
- In general, the contractor shall familiarize himself with the ESMF, RPF and the PF for the project as well as the World Bank Group Environmental, Health and Safety (EHS) Guidelines applicable to this contract's activities, with the following specific guidelines to be adopted and utilized: General, Occupational Health and Safety, Community Health and Safety and Waste Management. Other EHS Guidelines applicable to this contract include: _____. Specifically, the contractor shall make every effort to follow and implement the recommendations and mitigation measures of the ESMF, RPF and PF, applicable EHS Guidelines, and any supplemental safeguards document, to the satisfaction of the implementing entities, as applicable.
- The contractor shall always keep on site and make available to environmental inspectors or any authorized persons, copies of the ESMF and any other relevant documents for the monitoring and evaluation of environmental and social impacts and the level or progress of their mitigation.

Acquisition of Construction Materials

The contractor shall ensure that construction materials such as sand, quarry stone, soils or any other construction materials are acquired from approved suppliers and that the production of these materials by the suppliers or the contractor does not violate the environmental regulations or procedures as determined by the Zambia Environmental Management Authority.

Movement and Transportation of Construction Materials

The movement and transportation of construction materials to and within the construction sites shall be done in a manner that generates minimum impacts on the environment and on the community, consistent with the provisions of the ESMF.

Fencing of Construction sites

Construction sites refer to all areas required for construction purposes, including equipment staging areas. The boundaries of the site shall be demarcated prior to any work commencing on the site. It is the responsibility of the contractor to decide on an appropriate system of protective fencing for the site. The site boundary demarcation fence shall be removed when construction is completed, if appropriate.

The Contractor shall ensure that all their equipment and materials remain within the boundaries of the site and he shall ensure that materials used for construction on the site do not blow away or otherwise escape the site.

Storage of Construction Materials and Equipment

Construction materials shall be stored in a manner to ensure that:

- There is no obstruction of service roads, passages, driveways and footpaths;
- Where it is unavoidable to obstruct any of the service paths, the contractor shall provide temporary or alternate by-passes without inconveniencing the flow of traffic or pedestrians;
- There is no obstruction of drainage channels and natural water courses;
- There is no contamination of surface water, ground water or the ground;
- There is no access by public or unauthorized persons, to materials and equipment storage areas;
- There is no access by staff, without appropriate protective clothing, to materials and equipment storage areas;
- Access by staff and public or unauthorized persons, to hazardous, corrosive or poisonous substances including sludge, chemicals, solvents, oils, asbestos cement dust or their receptacles such as boxes, drums, sacks and bags is prohibited.

Solid Waste Management

The Contractor shall institute a waste control and removal system for the site. All wastes shall be disposed of offsite at an approved refuse disposal site in consultation with the Zambia Environmental Management Authority. Burning of any waste on any construction site is forbidden. The Contractor shall supply waste bins throughout the site at locations where construction personnel are working. The bins shall be provided with lids and an external closing mechanism to prevent their contents blowing out and shall be scavenger-proof to keep out any animals that may be attracted to the waste. The Contractor shall ensure that all personnel immediately deposit all waste in the waste bins for removal by the Contractor. Bins shall be emptied on a frequent basis and waste removed to a temporary storage site where it shall be properly contained in water and windproof containers until properly disposed of. The bins shall not be used for any purposes other than waste collection.

In performing his activities, the contractor shall use the best practical means for preventing emissions of noxious or offensive substances into the air, land and water.

He shall make every effort to render any such emissions (if unavoidable) inoffensive and harmless to people and the environment. The means to be used for making the emissions harmless or for preventing the emissions shall be in accordance with the ESMF and any other applicable safeguards document, and with the approval of the Zambia Environmental Management Authority and (if applicable) relevant Local Authority. Hazardous wastes shall be treated and disposed of in conformity with the national regulations and where applicable, with the supervision of qualified personnel.

Wastewater Management

The Contractor shall construct and operate the necessary collection and treatment facilities for waste water to prevent pollution. In cases where water is mixed with oily waste, separators shall be installed. The oil should be stored in tanks or drums as hazardous waste and disposed of in approved manner. The Contractor shall dispose of collected waste water in a manner agreed with the Zambia Environmental Management Authority and respective local officials.

The Contractor may discharge “clean” silt laden water overland, preferably vegetated land at the construction site and allow this water to filter into the ground. However, the Contractor shall ensure that he does not cause soil erosion as a result of any overland discharge.

Water from washing operations shall be collected in a sturdy container and disposed of in a manner agreed with Zambia Environmental Management Authority. Trucks delivering concrete or other construction supplies or equipment shall not be washed at the project site, nor in any other environmentally sensitive areas. All washing operations shall take place at a location where wastewater can be disposed of in an acceptable manner. Sanitary wastes shall be disposed into septic tanks.

Stockpiles, Borrow Pits and Quarries

Borrow pits and quarries shall be prohibited where they might interfere with the natural or designed drainage patterns. River locations shall be prohibited if they might undermine or damage the river banks, or require works in the wet area, which may carry too much fine material downstream. The Contractor shall ensure that all borrow pits and quarries are restored, either to their original conditions or to semi-natural habitats that maintain useful conditions for wildlife.

Site Restoration

The Contractor shall ensure that all temporary structures, equipment, materials, and facilities used for construction activities are removed upon completion of the project. Any oil and fuel contaminated soil shall be removed and buried in waste disposal areas. Soak pits and septic tanks shall be covered and effectively sealed off and the sites shall be re-vegetated.

Health and Safety of Workers

The contractor shall protect the health and safety of workers by providing the

necessary and approved protective clothing and by instituting procedures and practices that protect the workers from dangerous operations. The contractor shall be guided by and shall adhere to the relevant national labor regulations for the protection of workers. In addition, the contractors should indicate specific measures they will take during construction to prevent HIV-AIDS or other disease transmission by the work force.

Natural Habitats

In all relevant civil works projects, the contractor shall locate project facilities (permanent and temporary) so as to avoid or minimize the clearing of natural vegetation. The contractor shall enforce a strict prohibition on the washing of vehicles or changing of lubricants in waterways or wetlands.

Chance Finds Procedures for Physical Cultural Resources

If, during project construction, the contractor or project workers encounter archaeological relics, fossils, human remains, or other items of historical or other cultural value, the Contractor shall (i) temporarily suspend any works which might damage these items and (ii) notify the Supervising Engineer who will then notify the competent authority (National Heritage Conservation Commission) for guidance regarding the appropriate next steps to evaluate, salvage, recover, protect, and/or document the items found.

Worker Behavior

To help ensure that good environmental and social practices are consistently followed throughout project construction and operation, all workers, operational staff, and contract personnel shall be prohibited from (i) hunting, (ii) fishing, (iii) wildlife capture, (iv) bush-meat purchase, (v) plant collection, (vi) unauthorized vegetation burning, (vii) speeding, (viii) weapons possession (except by security personnel), (ix) working without Personal Protection Equipment (PPE), (x) inappropriate interactions with local people, (xi) disrespecting local customs and traditions, (xii) littering of the site and disposing trash in unauthorized places, (xiii) using alcohol on-site or during working hours, (xiv) sexual harassment, or (xv) setting unauthorized fires of any kind.

ANNEX 9: GRIEVANCE REDRESS MECHANISM

GRIEVANCE REGISTRATION FORM

Plaintiff: _____

ID Number : _____

Contact Information : _____

(Village ; mobile phone)

Property Contested : _____

(Type, e.g. land, house)

Location : _____

Description of Property : _____

_____ Nature
of Complaint :

Record of Prior Contacts and Discussions of Issues to Date:

| Date | Individuals Contacted | Summary of Discussions |
|------|-----------------------|------------------------|
| | | |
| | | |
| | | |

Signed (Plaintiff); _____ Date _____ :

Signed _____ (Filer _____ of _____ Complaint) :

Name _____ of _____ Person _____ Filing _____ in
 Complaint : _____

(if different from Plaintiff)

Position _____ or _____ Relationship to Plaintiff : _____
 Date : _____

Was agreement reached on the issues?: Yes No

If agreement was reached, detail the agreement below :

If agreement was not reached, specify the points of disagreement below :

Signed : _____ Signed : _____
 Chairperson, CDC
 Plaintiff

Signed : _____ Signed : _____
 Member, CDC

Signed : _____ Signed : _____
 Member, CDC

Signed : _____ Signed : _____
 Member, CDC

Date : _____

Grievance Registration Form

Review of Complaint

by

Project Management Unit

Date of Conciliation Session : _____

Was Plaintiff Present ? : Yes No

Topic _____ :

Was field verification of complaint conducted ? : Yes No

Findings of field investigation :

Summary of Conciliation Session Discussion :

Issue _____ :

Issue _____ :

Issue _____ :

Was agreement reached on the issues?: Yes No

If agreement was reached, detail the agreement below :

If agreement was not reached, specify the points of disagreement below :

Signed : _____

PMU Coordinator

Plaintiff

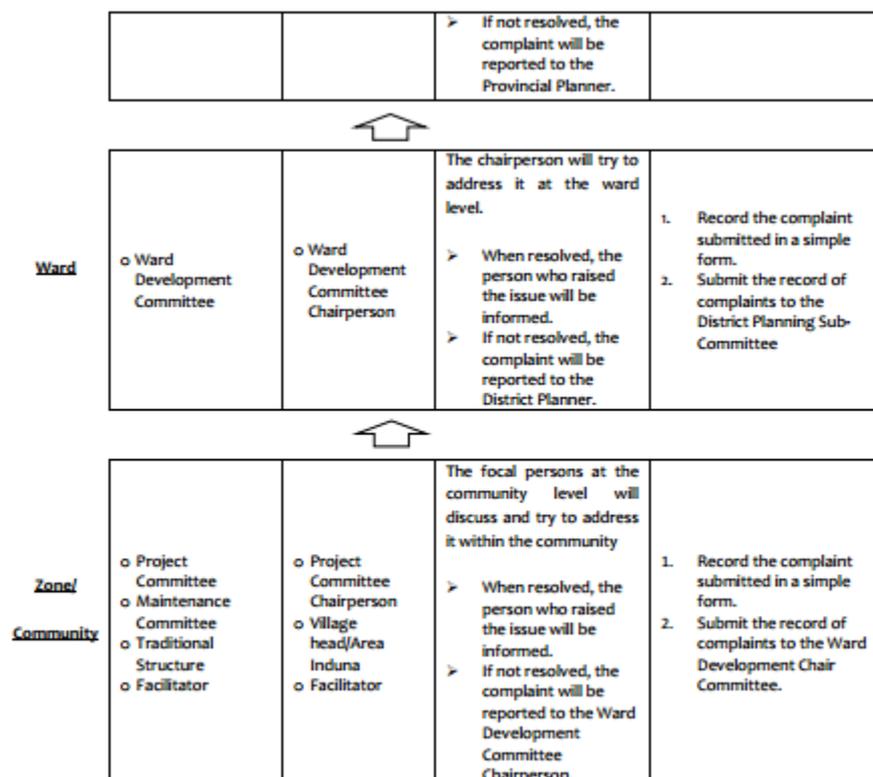
Signed : _____

PMU Member

Date : _____

Figure: Grievance Redress Mechanism for the Project

| | Focal Point Unit/Organizations | Focal Persons | When a complaint is submitted... | Recording complaints |
|-------------------|---|---|--|---|
| National | <ul style="list-style-type: none"> o National Project Coordination Unit (PCU) | <ul style="list-style-type: none"> o National Coordinator o M&E Officer o Independent Auditor | <p>The PCU (or an independent auditor) will try to address it.</p> <ul style="list-style-type: none"> ➤ When resolved, the person who raised the issue will be informed. ➤ If not resolved, the complaint will be reported to the World Bank, by the Climate Change Secretariat, within two weeks | <ol style="list-style-type: none"> 1. Record the complaint submitted in the national-level grievance database. 2. Review monthly monitoring submitted by the district/provincial-level, and enter all complaints with the status will be recorded in the national-level grievance database. 3. M&E officer will periodically review the grievance database and follow-up with focal persons to ensure all cases will be addressed. |
| |  | | | |
| Provincial | <ul style="list-style-type: none"> o Provincial Planning Sub-Committee o Provincial Project Implementation Unit | <ul style="list-style-type: none"> o Provincial Planner o Provincial Project Manager o M&E Officer | <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"> ➤ When resolved, the person who raised the issue will be informed. ➤ If not resolved, the complaint will be reported to the National Coordinator (or if the complaint regards the Coordinator, submit to the Independent auditor). | <ol style="list-style-type: none"> 1. Record the complaint submitted in the monitoring form. 2. Submit the project's monthly monitoring form including a record on complaints to the national-level PIU. |
| |  | | | |
| District | <ul style="list-style-type: none"> o District Planning Sub-Committee | <ul style="list-style-type: none"> o District Planner | <p>The planner will try to address it at the district level.</p> <ul style="list-style-type: none"> ➤ When resolved, the person who raised the issue will be informed. | <ol style="list-style-type: none"> 1. Record the complaint submitted in a monitoring form. 2. Submit the project's monthly monitoring form including a record on complaints to the Provincial PIU |



Suggested timeframes for grievance redress

| PROCESS | TIME FRAME |
|--|-----------------|
| Receive and register grievance | within 5 Days |
| Acknowledge, Assess grievance and assign responsibility | within 14 Days |
| Development of response | within 14 Days |
| Implementation of response if agreement is reached | within 1 Month |
| Close grievance | within 7 Days |
| Initiate grievance review process if no agreement is reached at the first instance | within 1 Month |
| Implement review recommendation and close grievance | within 2 Months |
| Grievance taken to court by complainant | - |