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Government of Republic of Malawi

Ministry of Agriculture, Irrigation and Water Development

MALAWI AGRICULTURE SECTOR WIDE APPROACH SUPPORT PROJECT II

P 164445

ENVIRONMENTAL & SOCIAL MANAGEMENT FRAMEWORK.

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Acronyms

| | |
|-------------|---|
| ADC | Area Development Committee |
| ADD | Agricultural Development Division |
| AIDS | Acquired Immuno Deficiency Syndrome |
| ASP | Area Stakeholder Panel |
| ASWAp-SP II | Agriculture Sector Wide Approach Support Project II |
| ASWAp-SP | Agriculture Sector Wide Approach Support Project |
| CAADP | Comprehensive African Agriculture Development Program |
| DAES | Department of Agricultural Extension Services |
| DC | District Commissioner |
| DEA | Director of Environmental Affairs |
| DEC | District Executive Committee |
| DESC | District Environmental Sub – Committee |
| DFO | District Forestry Officer |
| EAD | Environmental Affairs Department |
| EMA | Environment Management Act |
| EMC | Executive Management Committee |
| EPA | Extension Planning Area |
| ESIA | Environmental and Social Impact Assessment |
| ESMF | Environmental and Social Management Framework |
| ESMP | Environmental and Social Management Plan |
| FISP | Farm Inputs Subsidy Program |
| GDP | Gross Domestic Product |
| GoM | Government of Malawi |
| HIV | Human Immuno Deficiency Virus |
| IDA | International Development Association |
| MGDS | Malawi Growth and Development Strategy |
| MGDS III | Malawi Growth and Development Strategy III |
| MoAIWD | Ministry of Agriculture, Irrigation and Water Development |
| MoFEPD | Ministry of Finance Economic Planning and Development |
| MoITT | Ministry of Industry Trade and Tourism |
| MoLHUD | Ministry of Lands Housing and Urban Development |
| MoTPW | Ministry of Transport and Public Works |
| NAC | National Aids Commission |
| NAIP | National Agriculture Investment Plan |
| NAP | National Agriculture Policy |
| NCE | National Council on Environment. |
| NEAP | National Environmental Action Plan |
| NEP | National Environmental Policy |
| NGO | Non – Governmental organization |
| OP | Operational Policy |
| PA | Productive Alliances |
| PDO | Project Development Objective |
| PIU | Project Implementation Unit |

| | |
|-------|--|
| PS | Principal Secretary |
| PSC | Project Steering Committee |
| PCR | Physical Cultural Resources |
| RPF | Resettlement Policy Framework |
| SAPP | Sustainable Agriculture Productivity Program |
| SRBMP | Shire River Basin Management Programme |
| TCE | Technical Committee on the Environment |

Units

| | |
|----|---------------|
| ha | hectare |
| MK | Malawi Kwacha |
| mm | millimetre |

EXECUTIVE SUMMARY

Introduction

Agriculture remains the mainstay of Malawi's economy. Agriculture accounts for 30 percent of Gross Domestic Product (GDP) and generates over 80 percent of national export earnings. Agriculture employs 64.1 percent of the country's workforce comprising mostly the smallholder subsistence farmers. Agriculture is also the main contributor to the national and household food security and nutrition.

The focus of investments on agricultural production and productivity has been on maize. Only a few investments have focused on other commodities. Consequently, there have been no significant improvements in production as well as productivity of other agricultural enterprises of equal importance. This has resulted in increased risks of smallholder farmers as well as the economy at large to both weather related as well as price risks. The proposed project – the Malawi Agriculture Sector Wide Support Project II (ASWAp SP II) therefore seeks to address the gap that has been created by over emphasis on improving maize productivity and production.

The project will be financed through the existing Multi-Donor Trust Fund (MDTF) established to pool contributions from various donors as a joint effort to improve harmonization, alignment and donor coordination in the agricultural sector in Malawi. The Bank is the administrator of the MDTF. The core concept is to reduce the number of agricultural projects with similar objectives and is building on existing capacities and fostering in a more coherent and effective way policy dialogue between DPs and Government. This is a major step in support of national priorities and increased harmonization and alignment for greater impact and scaling up of investments. The ASWAp-SP II has an estimated total cost of US\$50.00 million. The project is expected to be implemented for 3 years from October 2017 until September 30, 2020

This document serves as an Environmental and Social Management Framework for Malawi Agriculture Sector-wide Approach Support Project II (ASWAp-SP II). The proponent is Ministry of Agriculture, Irrigation and Water Development. Government of Malawi is seeking a grant of US\$50 financed through the existing Multi-Donor Trust Fund (MDTF) established to pool contributions from various donors as a joint effort to improve harmonization, alignment and donor coordination in the agricultural sector in Malawi. The aim of the project is to improve production and productivity of other agricultural commodities in the intervention areas thereby promoting diversification of the agriculture sector in project impact sites through among others up-scaling successful interventions under the first ASWAp-SP.

The Malawi Agricultural Sector wide Approach Support Project II (ASWApSP II) is consistent with the World Bank's Malawi Country Assistance Strategy (2013-16) approved by the Board in January 2013. In particular, the project will be an integral part of the Bank's strategy to achieve the outcome 1.3 on "increased productivity and commercialization of agriculture and sustainable management of water resources for multiple uses" and outcome 1.2 on "promoting supportive environment that will enhance inclusive private sector growth and competitiveness", all falling under Thematic Area 1 of "Promoting sustainable, diversified and inclusive growth". In turn, the Project links with the country's development policies in particularly the MGDS II (2011-2016), under Sustainable Economic Growth (Theme 1), National Exports Strategy (2013-2018), National Agriculture Policy (2016-2020) and ASWAp (2010-2015).

Project description and Brief Description of Project Components

The project development objective is to improve the productivity and diversification of selected agriculture commodities in the project targeted areas in a sustainable manner. The proposed project will address the PDO through a community demand driven approach, rather than a Government-centric one. The project will

build on the successes of the first ASWAp SP and upscale them in the selected project areas. The project will ensure that the activities promoted are technically and environmentally sound and ensure that the activities are sustained after project closure. The proposed project will have four components that are aligned to the NAP and NAIP. Specific objectives include the following:

- a) To increase the yield of selected commodities;
- b) To diversify production;
- c) To increase adoption of improved soil fertility management technologies;
- d) To increase the motorized volume on targeted rural roads; and
- e) To increase the accessibility to market/volume of produce sold to markets.

The project has four components which are aligned to the NAP and NAIP. These components are (i) Sustainable agricultural productivity and diversification; (ii) Improvement of Rural Roads to enhance access to markets (iii) Institutional Development and Capacity building for Implementation of NAIP; and (v) Project Coordination and Management. The following paragraphs highlight the components and sub-components.

Project Appraisal under the World Bank Safeguard Policies

Initial evaluation of Malawi Agriculture Sectorwide Approach Support Project II under World Bank Safeguards Policies, has indicated some implications on some negative environmental and social impacts, and the project has been rated under category B of Operational Policy 4:01 (Environmental Assessment). Other safeguards policies triggered are: Operational Policy 4:09 (Pest Management), Operational Policy 4.12 (Involuntary Resettlement), Operational Policy 4.04 (Natural Habitats) and Operational Policy 4.11 (Cultural Property). The appraisal under category B of Operational Policy 4:01 (Environmental Assessment) entails that potential environmental and social impacts would have moderate significance in the environment, and there is need of environmental and social management plans to address the impacts.

This study has identified that Components 1 and 2 have triggered these four World Bank Safeguards Policies. The main sources of impacts would be civil works and land acquisition during construction of rural feeder roads for market access as well as the use of pesticides under Sub Components 1.4 and 1.5 which is likely to also pose some environmental and health risks to both human beings and biodiversity in the environment. All of the identified negative impacts can be reduced or in some cases avoided, with timely implementation of the mitigation measures outlined in this report.

Object and Rationale for the Environmental and Social Management Framework

The Environmental and Social Management Framework (ESMF) has been prepared as a guide to the screening of the proposed ASWAp-SP II activities for negative environmental and social impacts, which would require attention prior to project implementation. The ESMF outlines a number of strategies which will guide the development of the management and monitoring plans for the impacts identified.

In addition, a Pest Management Plan has been prepared and disclosed to guide and mitigate pesticide utilization and to promote integrated pest management; an Resettlement Policy Framework to guide the involuntary resettlement where land acquisition during road construction happens as well as a Biodiversity Management Plan where natural habitats are also affected during the project activities. The Terms of Reference for Chance Find for the Protection of Archaeological and Historical Sites for the project have also been included for reference if the OP 4.11 is triggered.

Environmental and Social Impacts

Out of the four project components, project components 1 and 2 has high probability of generating negative environmental and social impacts as compared to components 3 and 4. The proposed mitigation and enhancement measures have also been outlined. These have been presented in Chapter 8 together with a framework for the development of management and monitoring plans. The monitoring plan gives the parameters to be monitored and the frequency of monitoring.

Capacity Building and Training

In order to achieve the objectives of the program and to successfully implement the environmental mitigation measures and recommendations in the ESMF, it is important to ensure that target groups and stakeholders who have a key role in the implementation of the EMP are provided with the appropriate awareness, skills and training. In addition to the training, there is need to strengthen the capacity of various key institutions to effectively manage the environmental and social impacts of the program.

Users of the Environmental and Social Management Framework

As a reference material, the ESMF will be useful to several stakeholders who will be involved in planning, implementation and monitoring of the proposed project activities. Some of the key users of this ESMF are:

- Funding agencies/donors for the proposed ASWAp-SP II;
- District Executive Committee members in the targeted cities, towns and districts;
- Participating sectors in the implementation of the ASWAp-SP II;
- Politicians and local Traditional Leaders;
- Senior Central Government officials responsible for policymaking and project planning;
- Central Government officials responsible for environmental planning and management and;
- Engineers and contractors to be involved in implementation of the project activities

Approach and Methodology on Preparation of the Framework

The focus of the ESMF is to provide a screening process for potential environmental and social impacts for planned future project activities of the ASWAp-SP II, and to recommend a generic management plan for addressing the potential negative impacts. In the development of the ESMF, consultations with key stakeholders were employed. The rationale of these extensive consultations was to solicit views of a cross section of people, at the local, district, and Central Government level.

Recommendations and Conclusion

From this ESMF, conducted for the ASWAp-SP II, it is clear that the project will have both positive and negative impacts. The assessment generally indicates that the positive impacts outweigh the negative impacts. Furthermore, the negative impacts identified are mostly of low magnitude and can easily be mitigated. Some of the mitigation measures such as sustainable increase of the land, water and nutrient use efficiency are actually components of the ASWAp-SP II itself. Hence the ESMF has environmental and social management and monitoring plans which if well implemented, will result in the overall sustainability of agricultural productivity and contribute towards sustainable development. It is recommended therefore that the environmental management and mitigation measures proposed in this report are adhered to.

The ESMF recommends that the proposals made herein be implemented adequately to mitigate the consequential environmental impacts of the project activities. It is also recommended that the Environmental Affairs Department and other relevant line ministries should ensure that agricultural activities that lead to environmental problems are properly managed and monitored.

The ESMF also advances that for its implementation to be successful, involvement and participation of local communities is paramount. Specifically, it recommends:

- Use this Framework prior to any applicable project activity of the ASWAp-SP II;
- Environmental and social awareness education for the key stakeholders and affected communities;
- Training the project implementation personnel in the target districts to implement the ESMF and the screening process;
- Updating the ESMF when needed to respond to changing local conditions and to adjustments in project implementation plans; and
- Building capacities of the Town and District Councils to support the environmental and social management process.

Finally, it is recommended that the following key sections of this ESMF should be included in the Project Implementation Manual (PIM): the Screening Process (Sections 7.3); the Environmental Management and Monitoring Plans (Sections 8.4-8.5); and Capacity Building and Training Requirements (Sections 9.1 to 9.2). The Environmental Rules for Contractors (Annex 5) should also be a part of every bidding document and contract involving Project-supported civil works. The PIM will also incorporate recommendations and mitigation measures provided in the Pest Management Plan.

CHAPTER ONE: INTRODUCTION ON THE PROJECT

1.0 Background Information

Malawi has a population of about 15.9 million and is one of the poorest countries in the world; with average per capita income estimated at US\$381 in 2015. The economy depends on substantial inflows of economic assistance from Development Partners (DPs) and it is estimated that more than a quarter of the budget is being funded by external assistance. The growth in Malawi's GDP in 2013 was 5% and the services sector constituted the largest share of the GDP (51.7%) followed by Agriculture (29.4%) and Industry (18.9%)¹. However, the majority of households are poor. In 2013, it was estimated that 61% of the population lived below the income poverty line and 30% lived in severe poverty. The majority of those ultra-poor households (living on US\$1.25 per day or less) are female or child headed households.¹

Agriculture is the backbone of Malawi 's economy. Agriculture accounts for 30 percent of Gross Domestic Product (GDP) and generates over 80 percent of national export earnings. Between 2005 and 2011, over 80 percent of the country 's total exports were agricultural commodities, primarily tobacco, sugar and tea. Tobacco alone however, represents on average 60 percent of Malawi's total exports. Currently, agriculture employs 64.1 percent of the country 's workforce comprising mostly the smallholder subsistence farmers. Agriculture also significantly contributes to the national and household food security and nutrition.

This document serves as an Environmental and Social Management Framework for Malawi Agriculture Sectorwide Approach Support Project II (ASWApSP II). The proponent is Ministry of Agriculture, Irrigation and Water Development. Government of Malawi is seeking a grant of US\$50. Million to be financed through the existing Multi-Donor Trust Fund (MDTF) established to pool contributions from various donors as a joint effort to improve harmonization, alignment and donor coordination in the agricultural sector in Malawi. The aim of the project is to improve production and productivity of other agricultural commodities in the intervention areas thereby promoting diversification of the agriculture sector in project impact sites through among others up-scaling successful interventions under the first ASWAp-SP.

The Malawi Agricultural Sectorwide Approach Support Project II (ASWApSP II) is consistent with the World Bank's Malawi Country Assistance Strategy (2013-16) approved by the Board in January 2013. In particular, the project will be an integral part of the Bank's strategy to achieve the outcome 1.3 on "increased productivity and commercialization of agriculture and sustainable management of water resources for multiple uses" and outcome 1.2 on "promoting supportive environment that will enhance inclusive private sector growth and competitiveness", all falling under Thematic Area 1 of "Promoting sustainable, diversified and inclusive growth". In turn, the Project links with the country's development policies in particularly the MGDS II (2011-2016), under Sustainable Economic Growth (Theme 1), National Exports Strategy (2013-2018), National Agriculture Policy (2016-2020) and ASWAp (2010-2015).

1.2 Proponent and Implementing Agency

The proponent of the proposed Malawi Agriculture Sectorwide Approach Project II is Government of Republic of Malawi. Contact details and addresses of the proponent are as follows:

| | | |
|----------------|---|---|
| Proponent Name | : | Secretary for Agriculture, Irrigation and Water Development |
| | : | Ministry of Agriculture, Irrigation and Water Development |
| Postal address | : | P.O. Box 30134, Capital City, |

¹ www.indexmundi.com/malawi/economy-profile.html

Capital Hill, Lilongwe 3, Malawi.

Telephone : 265-01-789 033
Facsimile : 265-01-789 390
E-mail : agric@gov.mw.net

Project Contacts : Erica Maganga/Cosmas Luwanda

A central project implementation unit based in Lilongwe will coordinate the overall implementation of the Malawi Agriculture Sectorwide Approach Support Project II. The unit will be supported by sectoral ministries and these will include: Ministry of Agriculture, Irrigation and Water Development, Ministry of Lands, Housing and Urban Development, Ministry of Trade, Industry and Tourism. There will be number of consultants and contractors will be hired in the design and implementation of civil works to enhance good quality and timely completion of activities.

1.3 Project Overview

The project development objective is to improve the productivity and diversification of selected agriculture commodities in the project targeted areas in a sustainable manner. The proposed project will address the PDO through a community demand driven approach, rather than a Government-centric one. The project will build on the successes of the first ASWAp SP and upscale them in the selected project areas. The project will ensure that the activities promoted are technically and environmentally sound and ensure that the activities are sustained after project closure. The proposed project will have four components that are aligned to the NAP and NAIP. ASWAP SP I was implemented in all the districts of the country (Figure 1) while ASWAp SP II will be implemented in 12 selected districts (Figure 2).

Figure 1: Map of Malawi Showing ASWAp-SP I implementation Coverage

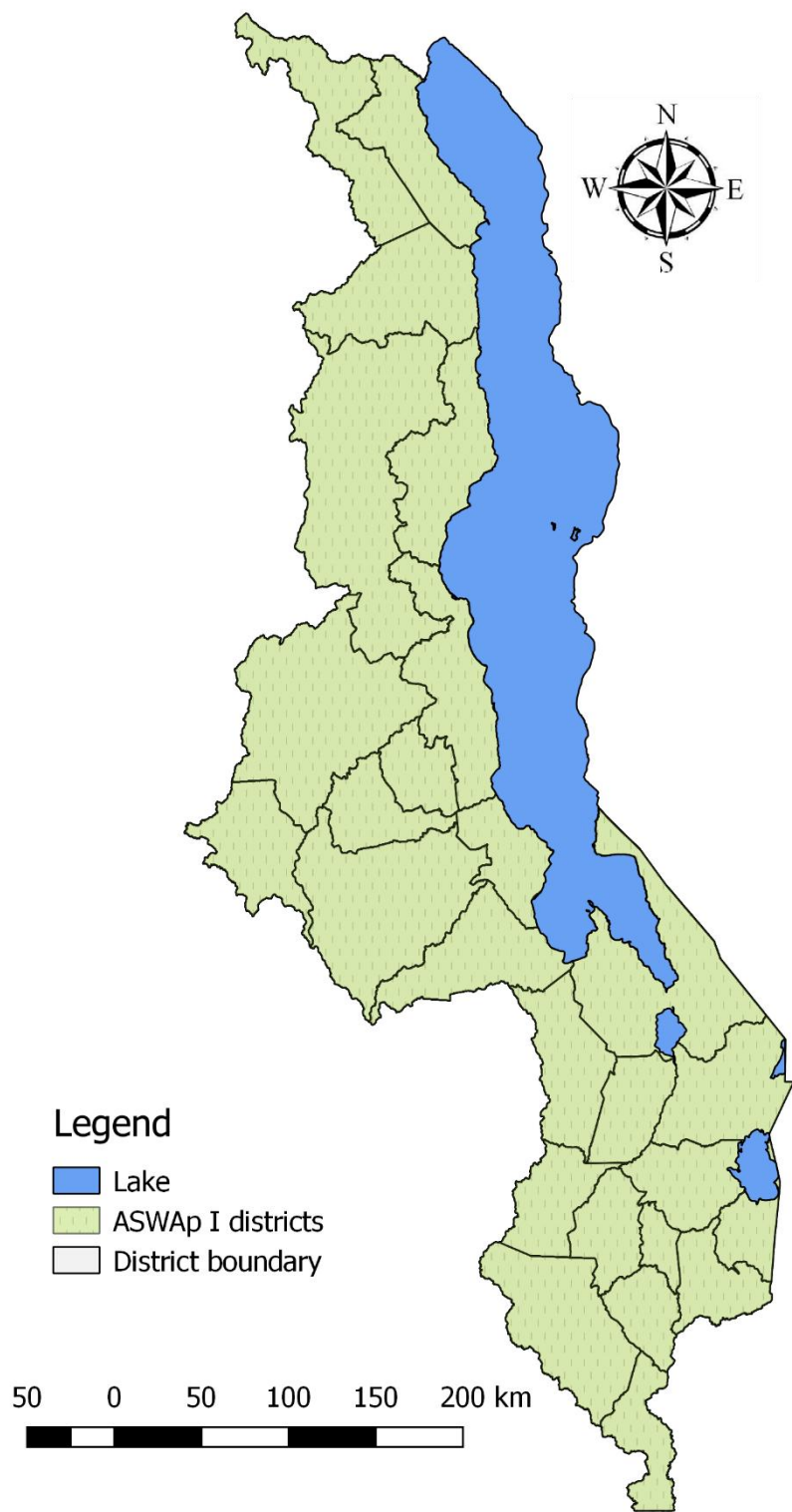
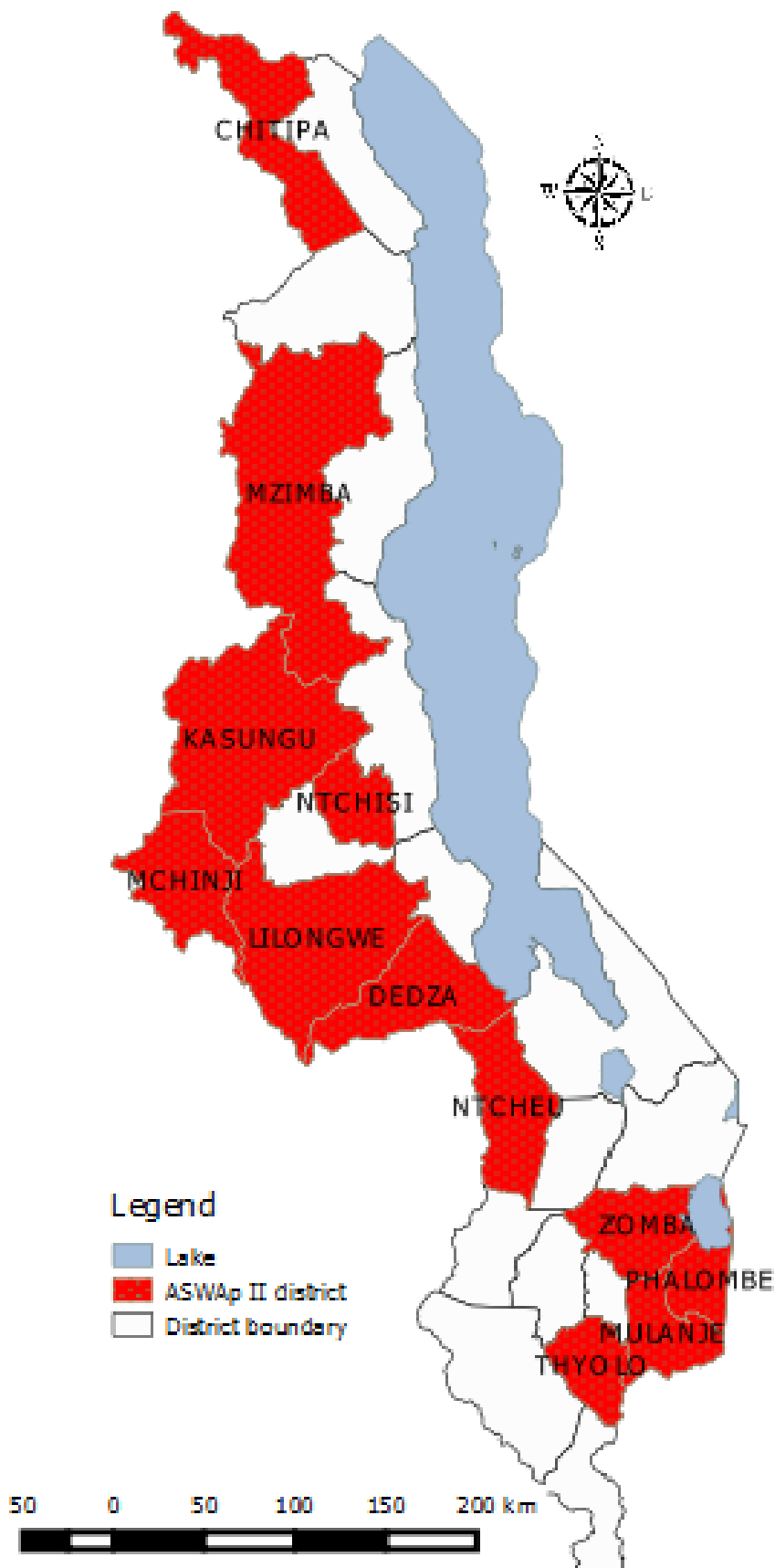


Figure 2: Map of Malawi showing ASWAp-SP II Implementation Coverage



1.4 Project Appraisal of World Bank's Safeguard Policies

Initial evaluation of Malawi Agriculture Sectorwide Approach Support Project under World Bank Safeguards Policies, has indicated some implications on some negative environmental and social impacts, and the project has been rated under category B of Operational Policy 4:01 (Environmental Assessment). Other safeguards policies triggered are: Operational Policy 4:04 (Natural Habitats), Operational Policy 4:09 (Pest Management) Operational 4.11 Physical and Cultural Resources and Operational Policy 4.12 (Involuntary Resettlement). The appraisal under category B of Operational Policy 4:01 (Environmental Assessment) entails that potential environmental and social impacts would have moderate significance in the environment, and there is need of environmental and social management plans to address the impacts.

This study has identified that Components 1 and 2 have triggered five World Bank Safeguards Policies, and these are: Operational Policy 4:04 (Natural Habitats), Operational Policy 4:01 (Environmental Assessment), Operational Policy 4:09 (Pest Management), Operational 4.11 (Physical and Cultural Resources) and OP4.12 and (Involuntary Resettlement). The appraisal under category B of Operational Policy 4:01 (Environmental Assessment) entails that potential environmental and social impacts would have moderate significance in the environs, and there is need of environmental management plans to address the impacts. The main sources of impacts would be civil works during construction of rural feeder roads (with low cost bridges, drifts and culvert rings installed where possible/required) for market access. The use of pesticides on under Sub Components 1.4 and 1.5 would also pose some environmental and health risks to both human beings and biodiversity in the environment. All of the identified negative impacts can be reduced or in some cases avoided, with timely implementation of the mitigation measures outlined in this report.

1.5 Rationale for the Environmental and Social Management Framework

The rationale for preparing this ESMF is that the exact location and design of the proposed activities are not known at this time, though the types of potential subprojects may be fairly well-defined. As a result, potential environmental and social impacts of the project activities cannot be identified through traditional safeguards instruments (e.g. an environmental and social impact assessment or resettlement action plan). In these situations, the appropriate safeguard document at this time is an Environmental and Social Management Framework (ESMF) which aims to establish a unified process for addressing all environmental and social safeguards issues on subprojects from preparation, through review and approval, to implementation.

For development project activities whose design details and locations are known, the Malawi Environment Management Act (1996) and the Malawi EIA Guidelines (1997) prescribe the conduct for Environmental Impact Assessment. However, these instruments do not have guidelines for the screening process for the identification, assessment and mitigation of potential localized impacts, where the project details and specific project sites are not yet known.

The ESMF provides mechanisms for ensuring that potential environmental and social impacts of the ASWAp-SP are identified, assessed and mitigated as appropriate, through an environmental and social screening process. The ESMF therefore complements the Malawi EIA procedures for meeting the environmental and social management requirements, as outlined in Appendix C of the EIA Guidelines. The ESMF also complies with the World Bank Operational Policies for environmental management of projects where specific details are not yet known.

1.6 Aims and Objectives of the ESMF

The objective of this ESMF is to ensure that the ASWAp-SP II is implemented in an environmentally and socially sustainable manner. The ESMF will provide the project implementers with an environmental and social procedures that will enable them to identify, assess and mitigate potential environmental and social impacts of the ASWAp-SP components.

The screening results would indicate whether additional environmental and/or social work will be required or not. Thus, the ESMF is designed to determine the appropriate level of environmental management, which could range from (i) the application of simple mitigation measures (assessed through the environmental checklists); (ii) to the preparation of a comprehensive EIA Report (according Malawi's EIA Guidelines), or, (iii) no additional environmental work. The ESMF will outline the:

- a) steps of the screening process from identification to approval of infrastructure investment;
- b) environmental and social mitigation measures that can be applied and adopted;
- c) draft generic terms of reference for an ESIA if required and;
- d) summary of the Bank's safeguard policies to ensure they are observed during project implementation
- e) review and approval of the screening results and separate ESIA reports; and
- f) environmental and Social Management Plan (ESMP)

The screening process has been developed because the locations and types of activities to be funded under the ASWAp-SP II are not yet known at this time; and therefore, potential impacts cannot be precisely identified.

The screening process will assist the project implementers to identify, assess and mitigate potential negative environmental and social impacts; and to ensure proper mitigation of these impacts. It will assist in determining whether preparation of a comprehensive ESIA and/or RAP is appropriate for the project components. The screening process, the environmental management and monitoring plans, the ESMF implementation arrangements and the proposed capacity building and training requirements will be included in the Project Implementation Manual (PIM).

1.7 Potential Users of the ESMF

The ESMF is prepared to be used as a reference manual by key stakeholders involved in the planning, implementation, management and operation of the ASWAp-SP II activities. Implementation of this ESMF will also support and assist with the achievement of compliance with applicable laws and regulations and with relevant Bank policies on environment and social development issues. As a reference manual, the framework would be useful to the following:

- (a) Funding and donor agencies for the ASWAp-SP II activities;
- (b) District Executive Committee members implementing the ASWAp-SP II throughout Malawi;
- (c) Politicians and local traditional leaders involved in ASWAp-SP II activities;
- (d) Senior government officials responsible for development planning of ASWAp-SP II;
- (e) Government extension workers in the ASWAp-SP II project areas;
- (f) Non-governmental organizations involved in the activities of the ASWAp-SP II;
- (g) Planners of the ASWAp-SP II project activities;
- (h) Engineers, Environmental Consultants, Contractors to be involved in the implementation of the project activities.

1.8 Technical Approach in Preparation of Environmental Framework (Methodology in Preparing the ESMF)

The focus of the ESMF is to provide a screening process for potential environmental and social impacts for planned future project activities of the ASWAp-SP II, and to recommend a generic management plan for addressing the potential negative impacts. In the development of the ESMF, consultations with key stakeholders were employed and are still ongoing. The rationale of these extensive consultations was to solicit views of a cross section of people, at the local, district, and Central Government level. The ESMF will include Annex 3 indicating the consultation events that took place (including dates and venues), the organizations and interest groups which participated, and the main issues discussed during the

consultations. The consultation meetings were organized in order to ensure that all the information pertaining to the project and its likely impacts is disseminated to the District Councils and the concerned stakeholders. Particular focus was given to the issues related to the positive and negative impacts and the instruments which have been put in place to mitigate against the negative impacts. The consultation meetings further provided an opportunity for stakeholders to express their views and opinions on the project and to raise issues of concern relating to the Project. These extensive consultations were carried out to share the views of key stakeholders and to obtain their input in the identification of environmental and social impacts of the ASWAp-SP II. A list of individuals and institutions consulted is included in Annex 4.

The strategies used and activities performed in the preparation of the ESMF included:

- a. Review of existing national biophysical and social conditions. Some of the sources of information included Socio-economic Profiles and Environmental Reports;
- b. Review of typical implementation approach and processes for the proposed ASWAp-SP II. This information was obtained from the project description, project concept note, project appraisal documents and other related literature.
- c. Determination of the ASWAp-SP II project stages and activities which are likely to have environmental and social impacts on the various environmental components;
- d. Identification and analysis of potential environmental and social impacts of the ASWAp –SP II; based on the field investigations and public consultations, project description, other similar documents and professional knowledge;
- e. Determination of the environmental and social components to be impacted by the project activities;
- f. Development of the appropriate screening process for the proposed project sites and project activities.
- g. Identification of appropriate mitigation measures for the likely potential environmental and social impacts and;
- h. Compilation of a generic management and monitoring plan for addressing the impacts during implementation, operation and maintenance of the project activities.

1.9 Constraints and Limitations of the Study

A number of constraints and limitations were experienced during preparation of the ESMF. As a result of these constraints and limitations, all the planned activities could not be accomplished in the manner that they were planned. However, in spite of these constraints and limitations, field investigations and public consultations were conducted in the majority of the districts that were targeted. Some of the constraints and limitations that were faced include the following:

- The ASWAp-SP II will cover twelve districts. However, for the purpose of preparing this ESMF not all the twelve districts of Malawi could be visited for the field investigations and public consultations. Hence the views captured during the public consultations, although considered as a very good representation of the twelve, could not be solicited from all districts targeted.
- The majority of the stakeholders had limited knowledge of the proposed ASWAp-SP II project. Hence, elaborate description of the ASWAp-SP II project was required to ensure that the stakeholders understood the project concept before they participated fully and meaningfully in the discussions;
- The public consultation and field investigations were conducted during the harvesting season when people are very busy removing their crop from the field. This meant that the attendance at the consultation meetings was somehow affected.
- Last, but not least, some information in the report was processed from secondary sources of data and such data includes maps, land resources information, atmospheric resources data, water resources data, biological resources data, socio-economic data and data on the agricultural services. This information should be interpreted and understood within the limitations associated with such data.

1.10 Experiences and Lessons learnt from ASWAp SP I

For ASWAp SP I, ESIA and PMP were prepared and implemented. Implementation of the ESIA for ASWAp-SP I has assisted staff and farmers with knowledge and information on how they can incorporate issues of environmental and social safeguards when implementing the various projects. ASWAp-SP I in collaboration with other projects (e.g. SRBMP, LDF and IRLADP) conducted country wide trainings to several staff on the ground who are imparting knowledge and skills on environmental management to farmers. However, implementation of ESIA at the district level relied on efforts put in by the EAD officer who need to be empowered and support the implementation of environmental issues in projects at district level. In the second phase, Safeguards specialist (this position was not created in the ASWAp-SP I) will be hired and will be responsible for the development and coordination for implementation of ESMPs. The safeguards specialist will be reporting to Department of Land Resources and Head of Secretariat.

ESMPs and RAPs for roads component were not developed however, compensation was done based on simple assessment that was conducted for the fields that were affected due to road diversions. ASWAp-SP II has already vested the responsibility in the Safeguards specialist to make sure that the task is completed.

Simple ESMPs for variety trials were developed but were not shared with contractors because district councils were not aware that they needed to be shared and implemented by the contractors. This made implementation of ESMPs difficult. The ESMF has included trainings for District Councils on implementation and management of ESMPs from contract bidding to implementation.

Financial resources for ESMPs for the variety trials were, in some councils, not set aside, which made implementation and supervision of ESMPs difficult. Equally there was need to strengthening coordination of committees involved in the screening processes at the district and community level. In addition, there is need for improved commitment from Controlling Officers on allocating financial resources for implementation of activities outlined in the ESMPs.

CHAPTER TWO: PROJECT DESCRIPTION AND IMPLEMENTATION OF ACTIVITIES

2.1 Aim and Objectives

The aim of the project is to address the gap that has been created by over emphasis on improving maize productivity and production. It intends to improve production and productivity of other agricultural commodities in the intervention areas thereby promoting diversification of the agriculture sector in project impact sites through among others up-scaling successful interventions under the first ASWAp-SP. Specific objectives include the following:

- a) To increase the yield of selected commodities;
- b) To diversify production;
- c) To increase adoption of improved soil fertility management technologies;
- d) To increase the motorized volume on targeted rural roads; and
- e) To increase the accessibility to market/volume of produce sold to markets.

The project has four components which are aligned to the NAP and NAIP. These components are (i) Sustainable agricultural productivity and diversification; (ii) Improvement of Rural Roads to enhance access to markets (iii) Institutional Development and Capacity building for Implementation of NAIP; and (v) Project Coordination and Management. The following paragraphs highlight the components and sub-components.

Component 1: Sustainable agricultural productivity and diversification

This component addresses constraints related to limited agricultural productivity and diversification which has been adversely affected by climate change, whereby limiting agricultural growth and food security. Key constraints include: (i) weak agricultural extension services, leading to low adoption of improved agricultural technologies, (ii) inadequate utilization of productive assets such as land and water – leading to unsustainable agricultural practices, (iii) limited access to finance, compounding to limited input use; (iv) soil erosion and low soil fertility, (v) pests and disease outbreak, and (vi) climate change. The broad areas under this project component include (i) Farm Inputs Subsidy Programme (FISP), in promoting access to improved maize, other cereals and legume seeds, (ii) crop diversification through strengthening seed systems (bananas, legumes, sorghum/millet, cassava and sweet potatoes), (iii) integrated soil fertility management, (iv) plant protection, pest and disease control, and (v) poultry production.

Sub-Component 1.1: Farm Input Subsidy Programme:

This sub-component will support (i) direct support to the seed component of the FISP as a vehicle to improve crop productivity and diversification - the seed component traditionally comprises of approximately 900,000 smallholder farmers annually, each provided with 5kg maize hybrid seeds (or approximately 8kg open pollinated varieties) and 2kg certified legume seeds. As part of the reforms, the Ministry announced that from 2017/18 agriculture season, the programme will be extended to other cereals like sorghum and rice, hence expanding crop diversification options; (ii) operations of the Logistics Unit, an independent entity responsible for farm family updating, beneficiary registry, input monitoring and verification of FISP payments, (iii) implementation of FISP reforms, aimed at improving efficiency and effectiveness of the programme, and (iv) independent monitoring/evaluation as well as improving coupon security and innovativeness, in line with the FISP reforms.

Sub-Component 1.2: Promotion of diversified crop production systems.

The project will support (i) micro propagation of clean banana planting materials, in response to the banana bunchy top virus (BBTV) disease and ensuring that smallholder farmers access clean banana planting materials, (ii) production of breeder and foundation legumes seeds (in response to demand), while ensuring that the legumes seed revolving fund that was established under previous project is functional to sustain future basic legume seed demands, (iii) production of improved breeder and foundation seeds for new varieties of sorghum/millet, while promoting demand and utilization by farmers and other sectors, (iv)

farmers' access to clean planting materials for cassava and sweet potatoes (highly productive and drought resilient) through private sector decentralized multipliers, working closely with NGOs, plus additional support to conserve and promote genetic resources, in addition to promoting modern nutritious crop varieties, and (v) development and provision of agricultural extension and messages integrated in relation to delivering the above agricultural production systems.

Sub-Component 1.3: Integrated Soil Fertility Management.

The project will support (i) scaling up of climate smart agriculture practices among the smallholder farmers in order to enhance the resilience of agricultural production systems to climatic change shocks – these will include conservation agriculture, agroforestry and other integrated sustainable land and water management practices (such as improving soil fertility and combating erosion, reclamation of degraded landscapes and watershed management), (ii) support development of area specific fertilizer recommendations and other good agronomic practices based on soil analysis, ensuring dissemination of the messages and exploring to piloting the recommendations in specific districts, in line with findings from the soil maps.

Sub-Component 1.4: Pests/diseases and plant protection:

The project will respond to emerging pests and diseases that greatly affect agricultural production, in line with the value chains supported. Specific support will be provided in the following areas: (i) support awareness and surveillance of pests and disease outbreak (ii) procurement of required pesticides, in line with safeguards policies, (iii) support operations of plant clinics, while linking such efforts to the district agricultural extension service system, (iv) support knowledge sharing and learning, and (v) institutional support for pest control (plant protection directorate, pesticide control board, department of agricultural research services) to effectively carry out their mandates. A separate Pest Management Plan has been developed to guide activities under this sub-component.

Sub-Component 1.5: Poultry production:

As part of promoting agricultural diversification and improving nutrition status of farmers, the project will support (i) hatcheries in government farm for production and distribution of 6 weeks Black Astralop chickens at cost recovery basis. Special support will be provided for the acquisition of solar equipment to allow continuous production of chicks in hatcheries that has been affected by load shedding, (ii) procurement of vaccination drugs/kits (e.g. new castle vaccines), while putting in place effective drug revolving fund mechanisms at community level, and (iii) promotion of nutrition education and awareness, particularly on the consumption of eggs at household level.

Component 2: Improvement of Rural Roads to enhance access to markets

This component will contribute towards market access to facilitate commercialization of agricultural production. Support will include rehabilitation of rural roads using labor-intensive methods and upgrading works through the Low Volume Sealing Methods in 12 selected districts, construction of bridges and curvets. This will be a continuation of similar interventions under the first ASWAp-SP in selected districts but now with emphasis on providing more income to the local communities through the rural road works and building capacity for contract management in the District Councils in order to provide proper environment for decentralization. This component will be implemented in complementarity with an EU project being implemented by the National Authorizing Officer Support Unit (NAO-SU) under the Rural Roads Infrastructure Programme, which is aiming at analysing capacity gaps in the 12 District Councils and providing them with capacity building in areas where they are lacking. Selection of district and roads will be done using criteria agreed between the Government and the Trust Fund Donors, targeting districts of good agricultural productivity where initiatives to increase agricultural production are evident.

Component 3: Institutional Development and Capacity building for Implementation of NAIP

The objective of this component is to continue building capacity in the Ministry of Agriculture for improved agricultural sector planning and investment management. This will consolidate the gains achieved so far through the implementation of the first ASWAp SP and scale up activities that had positive impact. Particularly, the project will continue to play a catalytic role in harmonizing government and donor investments in support of a medium-term investment strategy, the National Agriculture Investment Plan (NAIP). The ASWAp Secretariat through the ASWAp SP II will continue to provide support to the process of coordinating, strengthening the harmonized investment framework of the MoAIWD.

Sub-Component 3.1 Institutional Development, Capacity Building and Coordination:

The ASWAp Secretariat in MoAIWD still remain relevant and essential to strengthen the foundation for the harmonized investment strategy. The project will continue to support and strengthening the Secretariat to address the gaps identified during the implementation of the first ASWAp SP. The ASWAp SP II will also focus on improving the capacity of MoAIWD's staff in planning and alignment of the Ministry's budgeting to the NAIP framework. Further, the project will continue to provide support towards improving sector coordination through the Joint Sector Reviews (JSR), Agriculture Sector Working Group (ASWG), Technical working Groups (TWGs), and in monitoring and evaluation of public investments in the agricultural sector. The TWGs modalities will be reviewed to reflect the NAIP framework at the same time to make them more effective as discussion fora for the technical issues in the sector.

Sub-Component 3.2 Strengthening Agricultural Planning and Agricultural Statistics

This sub-component will provide support towards strengthening the capacity of Planning Department to enhance their ability for strategic planning and enhance monitoring and evaluation functions of the Ministry at all levels. Special attention will be on the development of the agricultural statistics systems and establish a repository where all data in the sector will be stored and retrieved easily. Specifically, the project will focus, on the implementation of the recommendations on crop estimation methodologies; development of agricultural statistics data bank; food security monitoring and reporting; capacity building in planning, annual work plan and budgeting and conducting studies that will inform policy formulation.

Sub-Component 3.3 Technical and Skills Development

Under the technical development and skills development sub-component, the Ministry developed a training plan following the completion of the CFA study. The CFA identified some technical and skills gaps and support will be provided towards training officers at Masters and Diploma levels at LUANAR and Natural Resources College respectively. In order to enhance fiduciary capacity in the Ministry, the project will also support capacity building in financial management and procurement at all levels. Further support will be provided to develop capacity in human resource planning and enable the Ministry to undertake human resource audits of MoAIWD that will help to mainstream gender and HIV/AIDS in the human resources plan.

Sub-Component 3.4 Activities under Retroactive Financing

This sub-component will facilitate the completion of a number of studies and contracts on-going from the previous ASWAp SP. There were consultancies that were in progress during the time the project was closing. However, most of the studies were very relevant to inform a number of reforms being initiated in the sector. These studies include; i) operationalization of the electronic permit system; ii) up-scaling identification of idle estates; iii) redesigning and development of the Land Information Management Systems (LIMS); iv) digitalization of land and deeds registry records; v) systematic regularization of land tenure; vi) the development of the agricultural extension strategy; and vii) functional review of ADMARC. The activities will be taken aboard through the retroactive financing arrangements (refer to the whole list activities under this arrangement in annex xxx).

Component 4: Project Coordination and Management

This component will finance activities of the Project Coordination Unit (PCU) that would be established in the Ministry of Agriculture, using the existing Ministry structures with some additional Technical Assistance to augment the Ministry's capacity. The PCU will oversee the implementation of project activities, monitor project progress, and coordinate between implementing entities, ensure sound fiduciary management including coordinating and accounting for the project funds utilization, ensure social and environmental safeguards compliance, and engage in communication and reporting. The main responsibility of the PCU will be to comply with the World Bank's fiduciary reporting requirements. This includes submitting a project implementation progress report on a semi-annual basis. In addition, the PCU would be responsible for implementing the calls for proposals, management of contracts and consultancies. A Project Steering Committee (PSC) will be established to provide overall guidance and will include the National Authorizing Officer (Chair); Ministry of Transport and Public Works; Ministry of Local Government and Rural Development; Ministry of Agriculture, Irrigation and Water Development; Road Fund Administration; Roads Authority; NCIC; Farmers Union of Malawi (FUM); EU Delegation to the Republic of Malawi; The World Bank Office in Malawi; TA Team (observer status).

2.2 Project Management and Implementation Arrangements

Ministry of Agriculture, Irrigation and Water Development will take charge of the project implementation working jointly with the National Roads Authority and Roads Fund Administration.

Consistent with the original project design and approach, the ASWAp-SP II will remain fully executed through existing organizational structures of the public service. It is already integrated into the now approved official ASWAp management structure as shown in the diagram below. The executive management committee (EMC) will act as the steering committee for the ASWAp-SP II. While the Ministry of Industry and Trade is already part of the committee, the Ministry of Transport and Public Infrastructure and Ministry of Lands Housing and Urban Development. The EMC will have overall managerial decision-making responsibility for the ASWAp-SP II, including approval of work plans and budget and review of quarterly and annual reports. The ASWAp sector working group will serve as a forum for dialogue and consultation with private sector, farmers' associations and civil society organizations. Technical working groups are established as instances to address specific technical and implementation issues.

The project implementation structures will include the following:

- (i) Project Steering Committee (PSC)
- (ii) Project Implementation Unit (PIU);
- (iii) Joint Sector Reviews/Agriculture Sector Working Group/Technical Working Groups;

Three main structures will be established at national level to facilitate smooth implementation of the Malawi Agricultural Sectorwide Support Project II. The structures include Project Implementation Unit and Project Steering Committee supported by the ASWAp Secretariat. Sections 2.2.1 to 2.2.4 highlight the roles of each of these structures.

At local level, implementation of the Malawi Agricultural Sectorwide Approach Support Project II will be implemented through an existing decentralized framework. District Agriculture Development Officer and district councils will coordinate the implementation of subprojects under the supervision of Project Implementation Unit.

2.2.1 Project Implementation Unit

This will be independent (autonomous) coordinating unit reporting to the Principal Secretary of Ministry of Agriculture and will comprise of Technical, fiduciary and safeguards specialists (consultants) to support in coordinating the project. The PIU will be led by the PIU Coordinator.

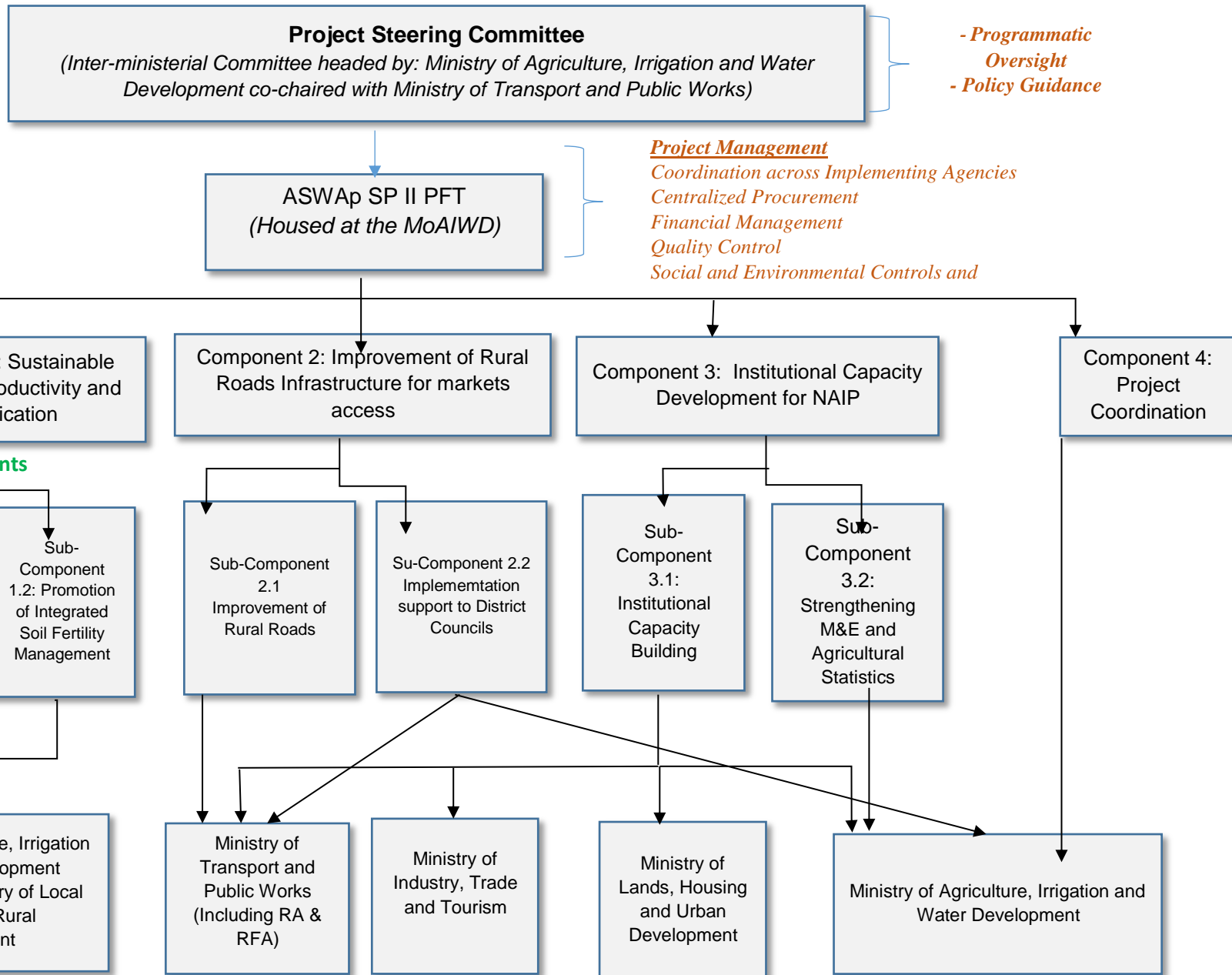
2.2.2 Project Steering Committee

Chaired by Ministry of Agriculture, Irrigation and Water Development with participation from Ministry of Finance, Ministry of Industry, Trade and Tourism, Ministry of Roads, National Roads Authority and Roads Fund Administration. The committee will provide high-level oversight and provide strategic direction to the project.

2.2.3 Project Technical Committee

Joint Sector Reviews/Agriculture Sector Working Group/Technical Working Groups under ASWAp will be used as dialogue policy platforms as relevant to the project.

Figure 1: ASWAp SP II Implementation Arrangements



2.3 Institutional Arrangements on Implementation

The project will be implemented mainly by five institutions namely (a) the Ministry of Agriculture, Irrigation and Water Development (MOAIWD); (b) Ministry of Transport and Public Works (MoTPW) (including Roads Fund Authority and National Roads Authority); (c) Ministry of Industry, Trade and Tourism (MoITT); (d) Ministry of Lands, Housing and Urban Development (MoLHUD) and Ministry of Local Government and Rural Development (MoLGRD). The following paragraphs highlight key roles for each of the institutions:

2.3.1 The Ministry of Agriculture, Irrigation and Water Development (MoAIWD)

Ministry of Agriculture, Irrigation and Water Development will have overall responsibility for implementation of the project. It will work hand in hand with its respective government departments in order to coordinate specific activities of the project. The Land Resources and Conservation Department will be responsible for ensuring integration of climate smart agriculture and implementation of ESMPs, while Department of Agricultural Extension will ensure strong integration of gender within the project and the Department of Crop Development will be responsible for crop diversification. The Trade and Marketing Unit which sits in the Department of Planning of Ministry of Agriculture will be responsible for supporting marketing environment of the selected agricultural commodities in the project districts while working closely with the Ministry of Industry, Trade and Tourism. At the implementation level, the project will work with respective District Councils. The Department of Land Resources Conservation in conjunction with Department of Environmental Affairs will be responsible for monitoring the synchronizations of recommended environmental and social mitigation measures within the sites for public works projects during construction, rehabilitation of existing facilities and during decommissioning phases of the construction and rehabilitation works. Environmental Affairs Department will also provide technical support towards Project Implementation Unit to ensure adequate integration of environmental considerations in planning, design and implementation of the sub-projects

2.3.2 Ministry of Industry, Trade and Tourism (MoITT)

Ministry of Industry, Trade and Tourism will be responsible for promotion of trade and private sector development, particularly championing to create a conducive environment for marketing and trade of the selected commodities in the targeted project districts .

2.3.3 Ministry of Transport and Public Works (MTPW)

The Ministry of Transport and Public works (MTPW) is custodian of transport sector policy development and it will be responsible for the provision of policy direction, overall project coordination and liaison with the MoAIWD related to the road component and oversight of the executing agencies. In accordance with the institutional framework for the sector, the MTPW delegates its powers for the management of the road network to the Roads Authority (RA) and the Ministry of Local Government and Rural Development through the District Councils. The Ministry will participate in both the PSC and PTC meetings. The Ministry will participate and Co-chair the PSC meetings (PS level) and PTC (at Director level).

2.3.4 Ministry of Lands, Housing and Urban Development (MoLHUD)

The Ministry of will be responsible for providing the technical support and leadership on methods of valuation of assets (such as buildings, trees, fruit trees, crops, vegetables) for purpose of compensations based on various pieces of legislations. The Ministry will provide benchmark on compensation schedules to determine values for loss of assets due to implementation of the projects for construction of roads. It will therefore lead in overseeing the implementation of the Resettlement Planning Frameworks (RPF) and

reviewing and approving Resettlement Action Plans (RAPs) consistent with the RPF. It will also participate in both PSC and PTC meetings of the Project.

2.3.5 Ministry of Local Government and Rural Development

The Ministry will be responsible for providing administrative guidance and technical support to the implementation of the project activities. It will take lead in the staffing of technical staff to ensure timely implementation of the project activities. The Ministry will also be an overseer for contractors hired for roads construction in the targeted district. It will also participate in both PSC and PTC meetings of the project.

Members of Environmental District Sub Committee which will consist of at least three technical specialists and led by the Environmental District Officer, will be responsible for carrying out the environmental and social screening of planned activities using forms in Annex 3. The Committee may include the Environmental District Officer, District Forestry Officer, Land Resources Conservation Officer, District Water Officer, Director for Planning and Development, District Agriculture Development Officer, District Lands Officer and District HIV Officer.

Members of District Environmental Sub Committee will be responsible for determining the appropriate environmental mitigation measures for the proposed subprojects and to arrange for the appropriate level of environmental work to be carried out.

Cross Cutting Issues

These include gender, nutrition and climate smart agriculture. These will be mainstreamed in most of the project activities. The gender and nutrition issues will be championed by the Department of Agriculture Extension and climate smart agriculture will be championed by the Department of Land Resources both from the Ministry of Agriculture , Irrigation and Water Development.

2.4 Institutional and Organization Framework for Potential Land Acquisition and Related Safeguard Issues

The Ministry of Agriculture, Irrigation and Water Development through the PIU will have the overall responsibility for coordinating and monitoring implementation of the RAPs and the biodiversity management plans (where applicable) that will be prepared for the subprojects. The District Councils, where the different subprojects will be implemented, shall make every effort to ensure that no land is acquired against the will of any person(s), exercising rights over their land. The District Councils and the local leaders are the important institutions, which will have interface with the RAPs implementing agency. They will play an important role during RAPs implementation. The Ministry of Agriculture, Irrigation and Water Development will oversee the progress of land acquisition through the District Councils. The District Councils will initiate land acquisition, secure replacement of land and prepare and maintain records of the PAPs. The Village Development Committees will coordinate with the District Councils to implement the resettlement and rehabilitation activities, among other activities. The Ministry of Agriculture and the District Councils will also be responsible for coordinating and monitoring the implementation of the Pest Management Plans alongside the RAPs and the biodiversity plans.

2.5 Project Cost Estimates

The project financing plan is as follows:

| Components by Financiers (US\$ Million) | GoM | MDTF | Total |
|--|------------|-------------|--------------|
| 1- Sustainable Agricultural Productivity and Diversification | | | |
| | | | |

| | | | |
|---|--|--|--|
| 2- Improvement of Rural Roads | | | |
| | | | |
| 3- Institutional Development and Capacity Development in Support of NAIP Implementation | | | |
| | | | |
| 4- Project Coordination | | | |
| | | | |
| Total Costs for Recipient executed activities | | | |
| | | | |
| Bank Executed Trust Fund for enhanced supervision | | | |
| | | | |
| Customized Cost Recovery Arrangements | | | |
| | | | |
| Total Project Costs | | | |

CHAPTER THREE: AGRICULTURE AND THE SOCIO-ECONOMIC ENVIRONMENT

3.1 General Situation

The economy of Malawi is predominantly agricultural, with about 90% of the population living in rural areas. The landlocked country in south central Africa ranks among the world's least developed countries. Agriculture accounts for 29% of GDP and 85% of export revenues. The economy depends on substantial inflows of economic assistance from International Monetary Fund, the World Bank, and individual donor nations. The government faces strong challenges: to spur exports, to improve educational and health facilities, to face up to environmental problems of deforestation and erosion, and to deal with the rapidly growing problem of HIV/AIDS in Africa.

Agriculture represents 37% of GDP, accounts for over 80% of the labor force, and represents about 80% of all exports. Its most important export crop is tobacco, which accounts for about 70% of export revenues. In 2008 the country was the tenth largest producer in the world. The country's heavy reliance on tobacco places a heavy burden on the economy as world prices decline and the international community increases pressure to limit tobacco production. Malawi's dependence on tobacco is growing, with the product jumping from 53% to 70% of export revenues between 2007 and 2008. Rural poverty stands at 56.5% compared to urban poverty at 25%.

Other important exports are tea, sugarcane and coffee. These crops are grown in commercial estates/plantations. Sugarcane is grown and processed by Illovo Sugar Group on its two large irrigated sugarcane estates at Nchalo in Lower Shire Valley and Dwangwa Sugarcane Estates in Nkhotakota District. Exports from sugar, tea and coffee constitute about 20% of Malawi 's exports. Most of tea is grown in Mulanje and Thyolo.

Malawi has few exploitable mineral resources. An Australian consortium exploits uranium in at Kayerekera uranium Mine near Karonga. Coal is being extracted at various sites including Mchenga Coal Mine and Eland Coal Mine in Rumphi District. Malawi's economic reliance on the export of agricultural commodities renders it particularly vulnerable to external shocks such as declining terms of trade and drought.

Malawi's manufacturing sector contributes 18.9% to the national GDP. Malawi's manufacturing industries are situated around the city of Blantyre and City of Lilongwe. Main sectors are food processing, construction, consumer goods, cement, fertilizer, ginning, furniture production and cigarette production. According to the post – disaster needs analysis report, the effects of damages and losses are estimated to result in a projected negative impact on GDP growth in 2015, to the tune of 0.6 percent. The economic costs resulting from the negative impact of the floods, other things being equal, may thus lead to GDP growth falling short of the 5.8 percent projection set for 2015. Economic growth is largely premised on expansions in agriculture, manufacturing, wholesale and retail trade, utilities, and transport sectors, most of which have been directly or indirectly adversely affected by the floods.

3.2 Agriculture

Malawi has a dualistic agricultural economy, comprising an estate and a smallholder sector. Until recently, the estate sector had monopoly with respect to the production of certain export crops, e.g. tea and burley tobacco. Various shifts in policy including increased price incentives, extension of credit to the smallholder sector and deregulation of agricultural marketing, have led to a large increase in marketed output of certain crops, particularly maize and tobacco, from the smallholder sector. It is important to note that total land under smallholder production is high compared to total land under estate production. For instance, in Lilongwe district, total smallholder land is 429 453 ha against 350 663 farm families while total estate land is 11525 ha against 25 estates (Lilongwe District Socio-Economic Profile, 12:2006).

Traditionally Malawi has been self-sufficient in its staple food, maize, mostly grown by smallholder farmers who mostly engage in subsistence farming. It is estimated that nearly 90% of the population engages in subsistence farming. Apart from maize, smallholder farmers produce a variety of other crops, beans, rice, cassava, tobacco, sorghum, millet and groundnuts (peanuts). The smallholder sector is itself increasingly differentiated, with a growing number of smallholders, including a disproportionate number of female headed households, cultivating less than 0.5 hectare, and unable to meet their subsistence needs. Apart from rain fed production, the Ministry of Agriculture and Food Security is also promoting winter and/or irrigation production.

The Government of Malawi reintroduced agricultural input subsidies in the 2005/2006 season with a view to increasing agricultural productivity and to improve food security at both household and national levels. Prior to that, subsidies were minimal especially after the introduction of Structural Adjustment Programs in the 1980s. The declining production of the country's main staple food maize, due to bad weather and low input uptake, among other reasons led to massive importation of maize for a number of years prior to 2005/06 and especially in 2002 and 2005. Based on the successful season in 2005/2006 which led to the country attaining a surplus of 400, 000MT, the **Farmer Input Subsidy Programme (FISP)** was introduced in 2005/06 to promote access to inputs, in both maize and tobacco production, to increase agricultural productivity and food security. Subsidies are targeted to government selected beneficiaries, using ('smart') vouchers to provide access to specific inputs distributed through the (para)public and private input distribution system. A standard maize subsidy pack consisted of one voucher for a 50kg bag of 23:21:0+4S, one voucher for a 50kg bag of urea and one voucher for improved maize seed. The fertiliser vouchers were redeemable for MK950 and the seed voucher required no top-up. A total of 2.5 million beneficiaries were targeted at programme cost of MK12,415 million. In spite of critics, the programme was a success in terms of increased maize production (1.23 in 2005 to 2.61 million tons in 2006 - FAOStat). Due to its success, several donors (DFID, Norway, Irish Aid) joined in programme funding and evaluation in 2006. In the consecutive years, Malawi experienced a surplus against expected consumption of about 0.4 and 1.3 million metric tonnes of maize, in 07/08 and 08/09 respectively.

The main purpose of the ASWAp-SP II is to address the gap that has been created by over emphasis on improving maize productivity and production. It intends to improve production and productivity of other agricultural commodities in the intervention areas thereby promoting diversification of the agriculture sector in project impact sites through among others up-scaling successful interventions under the ASWAp-SP II. In addition, the ASWAp-SP II will target the existing subsistence farmers by providing them with better access to inputs and technology. Hence there is no opening up of new agricultural fields and expansion into virgin agricultural land. Consequently, impacts of deforestation are not envisaged as a result of this programme.

Women comprise 70% of full-time farmers. Major shifts in the agricultural economy over the 1980s have had considerable impact on the smallholder sector, which was previously neglected in favor of estate production of export crops. However, an increasing proportion of smallholders are functionally landless, including a high proportion of FHHs. The formal sector offers limited employment opportunities, especially for women, and is shrinking under fiscal pressures and liberalization; the informal sector is correspondingly gaining in importance.

For the ASWAp-SP II, gender mainstreaming is important as it will facilitate equal or optimal distribution of roles and responsibilities; equal and fair access and control of inputs and credit; and division of labor. AGRESS will, among other strategies, use Gender Analysis to develop appropriate gender guidelines for the ASWAp-SP II. Sensitization and encouragement of women will be done to ensure that they confidently

participate more in the different agricultural activities. In this regard, the monitoring indicators include key indicators for monitoring women empowerment and participation.

3.2.1 Institutions Supporting Agriculture Development in Malawi

The Ministry of Agriculture, Irrigation and Water Development's (MoAIWD) is lead institution in supporting agriculture development in Malawi and its mission is to promote broad-based sustainable agricultural development for stimulation of economic growth and contributes to poverty reduction in Malawi. The ministry's instruments for carrying out its mission include policy formulation and regulation, supervision of parastatal agricultural organizations; coordination of training; and collaboration, and facilitating and regulating the activities of stakeholders in the agriculture sector. In line with the decentralization policy of 2000, the ministry's role as noted from its instruments shifted from direct implementation to more of a regulatory role.

In view of the decentralization policy, the MoAIWD is divided into 28 District Agriculture Development Offices (DADOs). The DAOs are the focal points for planning, providing information including technical advice, training and supervision of Extension Planning Area (EPA) staff and farmers. The DADOs are further divided into 154 EPAs. The EPAs are responsible for developing farmers' groups, facilitating farmers' access to credit institutions and farmer training. The EPAs are further divided into sections which are the lowest level of the MoAIWD structure.

In most cases, a section covers one village. The section is the main point of service-delivery to farmers and is also a point of interface for the MoAIWD with farmers. The proposed project falls under the DADOs. The districts have Irrigation Officers and Agribusiness Officers who will backstop implementation of different project activities among other subject matter specialists the Agriculture Extension Development Coordinators (AEDCs) and Agriculture Extension Development Officers (AEDOs) based at the concerned EPAs. It is however important to note that the existing staff capacity at both the district and EPA levels might not be adequate for the implementation of the project components.

The DAOs through the corresponding EPA provide agriculture extension services to different farming communities. The section advises and trains farmers among others on the following:

- a) Manure making, and using crop residues such as maize stock spreading in the garden;
- b) Soil conservation by giving each farm household 5 kg of soil conservation plants seeds; and
- c) Support in identifying farm households (about 20 % of all farms) in being eligible for the targeted inputs subsidy.

The extension workers use bicycle as a means of transport when visiting farmers for agriculture extension delivery. On average, an agricultural extension worker visits the project area twice a month. The area also uses the lead farmers' approach. The approach involves the use of progressive farmers or early adopters of technologies with a view to teaching their fellow farmers in their communities improved agriculture technologies. The agribusiness officer at district level assists farmers in the development of business plans. However, in spite of this training, the knowledge of farmers in agribusiness and in gross margins is very poor. This is partly due to the fact that most farmers don't keep farm records and hence, the data basis is very weak.

The MoAIWD is supported by other extension service providers which fall under the two types of non-governmental organizations (NGOs) working in the rural areas – the informal and formal organizations. Informal organizations are mostly local community based organizations, usually not registered, while formal NGOs are organizations which are legally registered and they can be either local or international organizations.

3.2.2 Production and Marketing

For smallholder farmers to sustain their production there is need for proper coordination between marketing and production. Since the majority of the smallholder farmers rely on agriculture as their main source of income, good output markets (in terms of prices and location) are important. The rural roads improvement component of the project will contribute to achieving this objective.

In Malawi, smallholder farmer's access to markets is through ADMARC, Town Assembly Markets, District Markets and private traders. With the liberalization of the market system, ADMARC and other government markets have moved out of the remote and rural areas leaving a window of opportunity to the private traders. This has created a gap as the window of opportunity has not been exploited by private trader's due to the challenges of infrastructure (roads and warehouse). The gap has resulted in no competitive rural markets where farmers are faced with the low output markets for their produce (laws of supply and demand). The improvement of rural roads under the ASWAp SP II project will help the farmers to also access the markets in the town centers.

With the poor road network in rural areas, individual and corporative farmers are faced with the problems of transportation of their produce to urban markets to fetch good prices. Hence, they are forced to sell to private traders at household level and at lower prices not competitive enough to break-even their cost. This is one of the problems which will be addressed with the improvement of rural roads and this was expressed as a positive intervention by the farmers during the consultations. Most of the agricultural products produced by the farmers in Malawi are sold through traders who usually buy the produce at the farm gate or at small markets within the vicinity of the project area. The mode of transport to the market for most crops with the exception of tobacco is carrying the produce on the head when travelling on foot or using bicycles. The most important players in the produce marketing chain for the project are the smallholder farmers and the vendors. Most of the food crops harvested is consumed and only a small percentage is sold to vendors.

3.3 Socio-Economic Environment

According to the third Integrated Household Survey conducted by the National Statistical Office (NSO), about 85 percent of households in Malawi are engaged in agricultural activities. Of these households, about 84 percent of households is engaged in crop production whilst 44 percent do rare livestock. Further, 43 percent of households engaged in agricultural activities are engaged in both livestock raring and crop cultivation.

One of the key factors for high levels of poverty in Malawi is high dependence on subsistence farming. Malawi's Gross National Income (GNI) per capita was estimated at US\$476.8 in 2015. The Human Development Index was estimated at 0.445 in 2014, positioning the country at 173 of the 188 countries.

In 2015 the country recorded GDP growth rate of only 2.8 per cent mainly due to floods that took place some districts in the country especially southern region districts. This was followed by drought which negatively affected agricultural production. Depreciation of Malawi Kwacha due to decrease of agricultural exports and the strengthening US dollar, among other reasons, led to an increase of average annual inflation which stood at 22.6 percent by June 2016. The country has experienced double digit inflation for four straight years from 2013. The adverse weather (floods and drought) combined to a lowly diversified agriculture production system and macroeconomic instability experienced in 2015 and 2016 further continued to cause low GDP growth rates of 2.8 percent and 3.4 percent in 2015 and 2016 respectively.

CHAPTER 4: DESCRIPTION OF POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK FOR THE PREPARATION OF ENVIRONMENTAL IMPACT ASSESSMENTS FOR PROJECTS

4.1 Policy Framework for Preparation of the Environment Impact Assessments

Over the years, Malawi has taken considerable strides in integration of environmental policies in development programmes with the aim of promoting and consolidating sustainable socioeconomic development in the country. Some of environment related policies include: the National Environmental Action Plan, the National Environmental Policy, the Malawi National Land Policy, the Environmental Management Act, Occupational Health, Safety and Welfare Act, Town and Country Planning Act, and Local Government Act among others. Section 4.1.1 below provides an overview of policy framework for preparation of environmental impact assessment for prescribed projects in Malawi. This consideration has been necessary because the project has to observe the requirements of the various policies of the government in planning and implementation. These policies are couched in the provision of the Constitution of Malawi which provides a foundation for environmental management in Malawi. Sections 13 (d) and (e) defines the role of the State in environmental management.

4.1.1 National Environmental Action Plan (NEAP)

Malawi prepared National Environmental Action Plan (NEAP) as a framework for integrating the environmental planning into the overall socio-economic development of the country through broad public participation. National Environmental Action Plan (NEAP) highlights key environmental issues that need to be addressed which include soil erosion; deforestation; water resources degradation and depletion; threat to fish resources; threat to biodiversity; human habitat degradation; high population growth among others. NEAP also provides guidelines actions to be taken by stakeholders such as local communities, government, agencies, non-governmental organizations and donors in environmental planning and management.

4.1.2 National Environmental Policy (NEP)

National Environmental Policy (2004) is based on the principles of National Environmental Action Plan, and provides broad policy framework on environmental planning in development programmes including undertaking environmental impact assessments for prescribed projects. The overall goal of National Environmental Policy is the promotion of sustainable social and economic development through the sound management of the environment in Malawi. The policy seeks to meet the following goals:

- promote efficient utilization and management of the country 's natural resources and encourage, where appropriate, long-term self-sufficiency in food, fuel wood and other energy requirements;
- facilitate the restoration, maintenance and enhancement of the ecosystems and ecological processes essential for the functioning of the biosphere and prudent use of renewable resources;

The National Environmental Policy has implications on the proposed Malawi Agriculture Sectorwide Approach Project II in the country. Potential negative impacts would be loss of trees, increase of soil erosion from land leveling and lose soils, sewage discharge, ground water pollution from oils from leakages from construction vehicles among others. As a requirement under the environmental policy, the project will require to upstream adequate measures for protection of soil from erosion. It will be necessary therefore that an appropriate environmental management plan will have to be implemented

during implementation and operation of new irrigation schemes and rural market infrastructure among others.

4.2 Administrative Framework for Environmental Impact Assessments

In Malawi, Environmental Affairs Department in the Ministry of Natural Resources, Energy and Mining provides an administrative framework for environmental impacts assessments for prescribed projects. The department is based in Lilongwe, and is led by Director of Environmental Affairs who is assisted by a number of professional and administrative officers.

Environmental Affairs Department is supported by a Technical Committee on Environment, a multi-sectoral committee set up under Environment Management Act. It provides expertise advice to Environmental Affairs Department on a wide range environmental matters including scrutinizing environmental assessments for projects. It provides professional opinions and makes necessary recommendations to the Director for appropriate action.

The Director for Environmental Affairs makes further recommendations on environmental impact assessments to the National Council on Environment (NCE) in the Ministry of Natural Resources, Energy and Mining for final consideration. The National Council on Environment is a policy making body and is made up Permanent Secretaries of government ministries and selected parastatals. The National Council of Environment (NCE) provides policy guidance and recommends decisions on environmental impact assessment reports to the Minister responsible for environmental matters. The Department of Environmental Affairs provides secretarial services to both the Technical Committee on Environment and the National Council on Environment

4.3 Legal Framework on Preparation of Environmental Impact Assessment

4.3.1 Environment Management Act (60:02), 1996

In Malawi, Environment Management Act, 1996 provides the basic legal framework for environmental planning including the preparation of environmental impact assessments for prescribed projects. The Environmental Management Act, 1996 is administered by the Director for Environment Affairs in the Environmental Affairs Department of the Ministry of Climate Change Management and Environment Affairs. The law covers specific responsibilities and duties for various public authorities in the environmental planning and management. The examples are as follows:

Section 9 sets out the powers and functions of the Environmental Affairs Department and duties of the Director of Environmental Affairs. The duties include spearheading environmental planning and monitoring in the country.

Section 10 of the Environment Management Act has provisions for the establishment, powers and duties of the National Council on Environment (NCE). The National Council on Environment is a policy making body which advises the Minister and the government on all matters regarding mainstreaming of environmental planning and management in public and private sector projects. The council is composed of Principal Secretaries of government ministries and selected senior executives of parastatals such as Malawi Bureau of Standards, National Herbarium of Malawi and University of Malawi. Its role includes overseeing the mainstreaming of environmental issues in socio-economic development programmes, overseeing the processing of environmental impact assessments for projects in Malawi. The National Council on Environment meets at least four times a year to deliberate matters.

Section 16 of the Environment Management Act has provisions for the establishment, the powers and duties of an inter-agency Technical Committee on Environment (TCE). The Technical Committee on Environment is composed of multi-disciplinary professionals. It acts as a technical arm for the Department of Environmental Affairs which provides technical expertise and professional recommendations on

matters of environmental planning and management including environmental impact assessment of projects. The Technical Committee on Environment (TCE) meets at least six times to scrutinize and review environmental impact assessments for projects and programmes as well as other matters. The Director of Environmental Affairs provides secretarial services to the Technical Committee on Environment on its operations.

Section 24 of the Environmental Management Act outlines the steps to be followed in the preparation of project briefs of projects which would require environmental impact assessment. Project briefs are the documents for appraisal of projects to determine whether or not environmental impact assessment would be required for particular projects.

Section 26 (3) of the act specifies that any project subject to environmental impact assessment cannot be issued with a license by any licensing authority in Malawi for implementation until a satisfactory impact study report is approved and a certificate is issued by the Director of Environmental Affairs.

4.3.2 Guidelines for Environmental Impact Assessments (EIA) in Malawi, 1997

In line with section 24 of the Environmental Management Act, the Government of Republic of Malawi produced a set of Guidelines for Environmental Impact Assessment (EIA) in Malawi in 1997. The principal use is to facilitate the procedures, steps in mainstreaming environmental planning and management in all development programmes. The guidelines are used by government agencies, project developers, donors and the general public in their project planning processes. The aim of the guidelines is to integrate environmental concerns into national development strategies for all types of projects, in both the public and private sectors. The guidelines outline specific roles for institutions in managing environmental impact assessment, the mechanisms for integrating in project planning; provide a list of prescribed projects that *require* an EIA (List A on pages 25 to 29) and a list of projects that *may require* an EIA (List B on pages 30 - 31) in all sectors. In case of the Malawi Agriculture Sectorwide Approach Project II, sub-projects are prescribed under various sections. Sections A13.4 and A13.5 prescribe projects implemented in flood prone areas. Section A1.2 prescribes new irrigation schemes or rehabilitation of irrigation schemes over 10 hectares in size. The guidelines also provide a framework for the format and structure of the environmental impact assessment reports in order to adequately articulate environmental planning responsiveness.

Both the Environment Management Act (EMA) and the Guidelines for Environmental Impact Assessment in Malawi have implications on the proposed project. The first is that the proposed project falls under prescribed list as required under the guidelines and as such the proponent has to comply with the preparation of an impact assessment as required under section 25 of the Environment Management Act. This is necessary so that the proponent prepares a comprehensive environmental management plan for mitigating potential risks during construction and during operation.

4.4 Review of other Relevant Policies and Laws Applicable for the Project

4.4.1 National Agriculture Policy (2016)

Malawi Government has developed a National Agriculture Policy to coordinate all efforts towards sustainable agriculture development. The policy includes commercialization agriculture as one main theme towards enhancement of agriculture and national economy. Among others, the policy advocates for farm mechanization and contract farming as some key measures to enhance competitive agricultural sector. The Malawi Agriculture Sectorwide Approach Project II incorporates both these aspects. In terms on environmental management, the policy advocates for conservation agriculture best practices. Integrated pest management measures in both smallholder gardens and estate sector.

4.4.2 Local Government Act (1998)

Local Government Act provides legal mandate for local councils in the planning, administration and implementation of various issues and development programmes in their respective geographical districts. One main function of the councils is that of local environmental planning and management. Some of the environmental management functions are provided in section 2 of the second schedule of functions of the council outlined in Local Government Act. These include agriculture development, local afforestation programmes, control of soil erosion, and appropriate management of solid and liquid wastes.

Local councils in the country will implement sub-projects under the ASWAp SP II in collaboration with Project Implement Unit and Area Development Committees at grass roots level. In addition, contractors for feeder roads have to liaise with councils on undertaking HIV/Aids interventions on construction sites, undertaking HIV/Aids sensitization to mobile construction workers during construction phase.

4.4.3 National Water Policy (2005) and Water Resources Act (2013)

The Government of Malawi has a National Water Policy with the aim of providing a comprehensive and integrated water resource conservation and management within the country. The Ministry of Agriculture, Irrigation and Water Development is responsible for the coordination of water policy issues which include: protection of water resources, water resource planning and development, review of applications for water abstraction and water quality management including control of pollution.

The principal statute which regulates water resource use, protection and conservation is the Water Resources Act (2013). The administration of these responsibilities rests with The National Water Resources Authority. The Water Resources Act (2013) is the legal framework for the establishment, powers and duties of the National Water Resources Authority. This is a policy making body which advises the government as a whole on all matters regarding water resource protection, abstraction and conservation. Its role includes overseeing the processing of applications for water rights and monitoring water abstraction. Section 88-89 outlines measures and restrictions to access to water, to abstractions and interferences in water flows, to pollution of water in public water resources by people or companies. It is a requirement by people or companies who want to use water other than domestic uses by local people to apply for permission from National Waters Resources Authority before abstraction.

National Water Policy advocates for sustainable management of catchment and riverine areas in order to minimize soil erosion and siltation of river courses. Siltation of river courses is one of cause of floods in Malawi. This is because Shallow River causes overflows and destroys properties along the flood plains

There are a number of implications of National Water Policy and Water Resources Act (2013) related to the proposed project. The contractors may need to abstract water from for mitigation of dust pollution during construction of the feeder roads where diversions are constructed. In this regard, contractors will have to apply for water rights abstraction from National Water Resources Authority.

4.4.4 Public Health Act (1966)

Public Health Act provides legal framework on planning and management of a wide range of health-related issues including environmental health, occupational health and solid wastes management. There are two implications in relation to the proposed project, and these are: a) the provision of appropriate toilets and provision of proper storm water drains around feeder roads and b) Contractors will have in place adequate temporary toilets for both female and male workers during construction period.

4.4.5 Occupational Safety, Health and Welfare Act (1997)

The act provides regulatory mechanisms to ensure safe and secure work places in Malawi. Under section 6 and 7 of this act, all work places require work place registration certificate from the Director of

Occupational Safety, Health and Welfare in the Ministry of Labor and Vocational Training. General safety facilities stipulated for most work places include the following: adequate ventilation, cleaning materials and cleanliness of workplaces, lighting, washing facilities, change rooms for some workers, sanitary conveniences and first aid kits. Both employers and employees are sensitized on basic procedures for proper use and operations of the welfare and safety facilities within work places. Non – compliance or negligence on use of work safety facilities is an offence under sections 82 and 83 of the act. Penalties include a fine of up to MK200, 000.00 and 12 months imprisonment of the offenders.

Section 58 stipulates the provisions of protective clothing (such as gloves, foot wear, screens and goggle, ear muff and head covering) to protect workers from excessive exposure to nuisances with some work activities. And section 59 stipulates the provisions for breathing masks to employees against excessive emissions of dust and fumes. Such incidences are common with construction sites.

Some of the implications from the Occupational Safety, Health and Welfare Act for consideration under the project include the provision of necessary work place environmental health safety measures within construction sites. These could be sanitary facilities, washing rooms, change rooms, first aid kits and cleaning materials as well as the provision of protective clothing (during application of pesticides) in situations of exposure to risks.

4.4.6 The Pesticide Act, 2000

Pesticide Act provide legal and administrative framework for registration, procurement, distribution, export, importation, storage, usage and disposal of the pesticides and related materials. The administrative work is done by the Pesticide Control Board which is established under section 10 -11 of the act. Main duties include: processing registration of pesticides and subsequent issue of certificates and permits for procurement, importation, export, storage distribution, usage and safe disposal of pesticides. The other duty is to provide public campaigns on proper usage, storage, importation, export, safe disposal of pesticides in Malawi. By and large the provisions of the pesticide act are intended to minimize the potential adverse effects from pesticides to the people or non-target species and the environment in general.

The implications of this act on the ASWAp SP II Project is that subcomponent 1.5 of Project deals solely with Pests and Diseases and therefore the requirements of this Act should be observed when dealing with pesticides and agro-chemicals required to address the pests and diseases identified under the subcomponent. Therefore, there will be need to undertake the following steps:

- (i) To obtain license from Pesticide Control Board for approval and registration of the potential pesticides to be used in the Project. This is necessary so that the board can screen them, and recommended whether the proposed agrochemicals are acceptable for use in Malawi, and whether or not they safe for use in Malawi.
- (ii) To put in place adequate facilities and mechanisms for storage and usage of the pesticides where they are required. The Pesticide Board will have to inspect and certify about the security of the facilities for storage of the pesticides.
- (iii) To train designated workers in best practices in storage and packaging of the pesticides, appropriate usage of the pesticides so as to minimize misuses and eventual accidents.

4.4.7 National Land Resources Management Policy and Strategy (2000)

The National Land Resources Management Policy and Strategy was a first attempt at documenting a set of policy on land use and management in the history of Malawi and it is consistent with the recommendations made in the National Environmental Action Plan (NEAP), 1994. The policy addresses issues of land capability, land degradation, land suitability, land tenure, land conservation, soil erosion, water course systems and sustainable land use. Its overall policy goal is to promote the efficient, diversified and sustainable use of land

based resources both for agriculture and other uses in order to avoid sectoral land use conflicts and ensure sustainable socio-economic development. This is important to the implementation process of the proposed project in that it supports the activities which aim to ensure that the envisaged increase in agricultural production and productivity promotes land resources conservation in accordance with the strategy.

4.4.8 National HIV/Aids Policy (2012)

The National HIV and Aids Policy (2012) highlights that HIV/Aids impact on the country is quite significant and affects a range of socio-economic activities be it in agriculture, fisheries, public sector, private sector, tourism, urban areas, rural areas among others. National HIV/Aids Policy identifies migrant workers (mobile population) and women are among highly vulnerable people to transmission of HIV and Aids and other sexually transmitted diseases. Sub – projects under Malawi Agriculture Sectorwide Approach Project II will enhance movement of migrant workers. An implication from migrant workers is that some single male migrant workers would be at increased likelihood of contracting HIV and Aids in the project area. Increased disposal income from migrant workers may enhance some workers to indulge in extra – marital affairs with either local girls or married women within surrounding villages. These sexual activities would enhance the spread of HIV and Aids among workers and local people. In order to minimize risks, this study recommends the following mitigations measures:

- a) Periodic distribution (and training in use) of both female and male condoms to workers.
- b) Periodic HIV and Aids sensitization meetings for workers.
- c) Development of HIV and Aids Work Place Policies for sub-projects.

4.4.9 National Gender Policy (2000)

The National Gender Policy (2000) (currently under review) calls for integration of gender responsiveness in planning and implementation of development projects and programmes. It is considered that consideration of gender needs and benefits enhance poverty reduction in both rural and urban environments. The proposed Project has to integrate consideration of needs of women, men, boys and girls in project activities. Some of potential considerations could be the following areas:

- (a) Employment of both male and female workers in the rehabilitation of the feeder roads;
- (b) Consideration of both men and women participation in the various project interventions in order to enhance income for both men and women;

4.4.10 The Malawi National Land Policy

The Malawi National Land Policy focus on land as a basic resource common to all people of Malawi and for enhancement of socio – economic development. Section 4.11 affirms equitable access to land to all citizens of Malawi. The policy recognizes human settlement and agriculture as the major benefactor land use sector. As such, the policy advocates for orderly resettlements of villages or households especially in rich agricultural zones. Furthermore, the policy guarantees full legal protection to customary land tenure to the people of Malawi in order to enable the ordinary Malawians adequately participate in subsistence farming and socio-economic development activities. The Malawi National Land Policy also advocates for fair compensation on open market value to local people on all classes of land (whether held under customary land tenure or leasehold) in case such land is acquired for public interest or for development of public infrastructure. In reference to relocation of displaced people, the policy advocates adequate consultations with the affected people so that their interests are taken care of. Such provisions will have to be made in case of land acquisitions for some commercial farms Malawi Agriculture Sectorwide Approach Project II. Examples could be consideration of acquisition of land for some selected new feeder roads.

4.4.11 Land Act and Land Acquisition Act

Land Act covers land tenure and land use quite comprehensively. Section 27 and 28 of the act guarantees landholders for appropriate compensation in event of disturbance of or loss or damage to assets and interests on land. The act also provides procedures of acquisition of one class of land to another. The process begins with appropriate notice to the existing lessee of the land.

Land Acquisition Act covers procedures relating to the acquisition of land by either the government or individuals or developers from any form of the land tenure systems in Malawi. The act makes provision for preliminary investigation, preliminary survey of the area and the procedure to be followed where land should be acquired. The procedure for land acquisition starts with issue of a formal notice to persons who have existing interests in the land. Such notices are issued under section 6 of this act. Sections 9 and 10 of the act covers the steps for assessment of land, crops, fruits and other landed properties and subsequent procedures for payments of the compensations to the displaced people. Section 11 to 14 outlines the necessary steps for land surveying and land transfer following notices in government gazette. The responsibility of identifying alternative land for those affected people rests with their village headman, their traditional authority and District Commissioner of the district. The District Commissioner assists in transportation and provisions of necessary services on new sites of resettlement.

Implications for the law on the project include land acquisition for new irrigation schemes and rural market centers and potential risks of movement of people from some places to pave way for sub-projects. Project Implementation Unit and district councils will ensure adherence to sections 6-14 of Land Acquisition Act.

4.4.12 National Biodiversity Strategy and Action Plan (2015 – 2025)

The Draft National Biodiversity Policy is still being developed by the Department of Environmental Affairs under the Ministry of Natural Resources, Energy and Environment (MoNREE). It will therefore also be one of the reference policies under the Project in light of the issues pertaining to the triggered OP4:04 on Natural Habitats. This National Biodiversity Strategy and Action Plan II is a framework for action that will guide Malawi to sustainably manage its biodiversity. The Strategy outlines the status of the biological resources in Malawi and provides strategies, targets and actions to be taken to ensure their sustainable management. This Strategy strives to attain improved capacity and knowledge on biodiversity management; increased mainstreaming of biodiversity in sectoral and local development policies and plans; reduced direct pressures on biodiversity; improved status of biodiversity through safeguarding of ecosystems, species and genetic diversity; and enhanced benefits to all from biodiversity and ecosystem services. The strategy is in line with the Malawi Growth and Development Strategy II, which prioritizes biodiversity management programs among other socio-economic and environmental issues.

4.5 Review of World Bank Safeguard Policies and Implications

Preliminary appraisal of the project on World Bank Safeguards policies has been made, and results of implications are summarized in annex 2. Results indicate whether and how the project activities trigger one of these policies. Those policies which have not been triggered have been indicated.

This study has identified that Components 1 and 2 under Malawi Agriculture Sector Wide Approach Project II have triggered 5 World Bank Safeguard Policies, and these are: Operational Policy 4.01 (Environmental Assessment), Operational Policy 4.04 (Natural Habitats), Operational Policy 4.09 (Pest Management), Operational Policy 4.11 (Physical and Cultural Resources) and OP4.12 (Involuntary Resettlement). Rehabilitation works of feeder roads has potential to generate some negative impacts. The appraisal under category B of Operational Policy 4.01 (Environmental Assessment) entails that potential environmental and social impacts would have moderate significance in the environs, and there is need of environmental management plans to address the impacts. The main sources of impacts would be from civil works during construction of feeder roads. The use of pesticides on crops and storage in warehouses would also pose

some environmental and health risks to both human beings and biodiversity in the environment. All of the identified negative impacts can be reduced or in some cases avoided, with timely implementation of the mitigation measures outlined in Pest Management Plan.

Environmental and Social Screening of all sub-projects will be undertaken during planning and design stage, before commencement of civil works on the site. Environmental and social management plans will be prepared to address all potential negative impacts. Resettlement screening exercise and/or Resettlement Action Plan will also be carried out in line with requirements of Resettlement Policy Framework. Resettlement screening guide measures to address social and economic impacts on project affected people.

4.5.1 Operational Policy 4:01 (Environmental Assessment)

The objective of Operational Policy 4:01 (Environmental Assessment) is to ensure that Bank financed projects are environmentally sound and sustainable, and that decision-making is improved through appropriate analysis of actions and mitigation of their likely environmental impacts. This policy is triggered if a project is likely to have potential adverse environmental and social impacts in its area of influence. The rehabilitation of rural feeder roads under Malawi Agriculture Sectorwide Approach Project II are likely to have some negative environmental and social impacts, which will require mitigation. In order to comply with this safeguard policy, the following activities must be done prior to implementation of sub-projects. These are:

- (a) Environmental and social screening of sub-projects using a screening form attached as annex 3. The screening process will be done to appraise environmental and social risks and identify potential mitigation measures in advance.
- (b) Preparation and approval of Environmental and Social Management Plan (ESMP) for individual sub-projects. ESMP will guide the implementation of mitigation measures where need be.

4.5.2 Natural Habitat (O.P.4.04)

The objective of the Operational Policy 4:04 (Natural Habitats) is to avoid the disruption of natural habitats and recognizes the importance of maintaining their core ecological functions including forests, and the biodiversity they support. The Policy encourages borrower to incorporate into their development and environmental strategies analyses of any major natural habitat issues, including identification of important natural habitat sites, the ecological functions they perform, the degree of threat to the sites, priorities for conservation, and associated recurrent-funding and capacity-building needs.

The project implementing agency takes into account the views, roles, and rights of groups, including local nongovernmental organizations and local communities, affected by projects involving natural habitats, and involve such people in planning, designing, implementing, monitoring, and evaluating such projects. Involvement may include identifying appropriate conservation measures, managing protected areas and other natural habitats, and monitoring and evaluating specific projects. The affected stakeholders are provided with appropriate information and incentives to protect the natural habitat.

The locations of the sub projects of ASWAp-SP II component 1 and 2 are not yet known hence it is not clear whether natural habitats will be affected or not. This framework has triggered the policy as a precautionary measure so that if the policy is indeed triggered, there is proper guide to management of biodiversity based on the findings of the environment and social assessment. Depending on the extent of impact either ESMP will cover mitigation measures/biodiversity restoration measures or a separate biodiversity management plan will be prepared.

4.5.3 Pest Management (Operational Policy 4.09)

Malawi Agriculture Sectorwide Approach Project II will support the disposal of infected banana plants and attend to the Fall Army Worm and any other pest which will be of interest during project implementation. Management of livestock farms will certainly increase the intake of pesticides. The use of pesticides on these sites will trigger Pest Management Operational Policy (OP 4.09). This policy covers the procurement and use of pesticides on Bank funded or Bank supported project. The procurement of any pesticide in a Bank-financed project is contingent on an assessment of the nature and degree of associated risks, taking into account the proposed use and the intended users. The following criteria apply to the selection and use of pesticides in Bank-financed or bank supported projects:

- (a) They must have negligible adverse human health effects;
- (b) They must be shown to be effective against the target species;
- (c) They must have minimal effect on non-target species and the natural environment.
- (d) The methods, timing, and frequency of pesticide application must aim to minimize damage to natural enemies.

A separate and detailed **Integrated Pesticide Management Plan** has been prepared to support sustainable means of management of pests and diseases on irrigation schemes. Some measures include use environmentally safe pesticides, and use of biological means for control of pests and diseases as opposed to use of pesticides.

4.5.4 Physical and Cultural Resources (O.P.4.11)

The ASWAp SP II will support the rehabilitation and construction of rural roads in the targeted twelve districts. However, the current location of these roads is not yet known and therefore in order to ensure the protection of cultural heritage, the **Terms of Reference for the Archeological Chance Find Procedures** have been provided in the project to guide the process in implementation of mitigation measures in the event that the policy on Cultural Properties or Physical Cultural Resources (OP4.11) is triggered. The ToRs are presented in Annex 6. The chance find procedures aims at restoring and protecting any/all cultural or archeological heritage that could be affected by activities of ASWAp-SP II.

4.5.5 Involuntary Resettlement (O.P.4.12)

The objective of Operational Policy 4:12 (Involuntary Resettlement) is to avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project designs. Furthermore, it intends to assist displaced persons in improving their former living standards; it encourages community participation in planning and implementing resettlement and in providing assistance to affected people, regardless of the legality of title of land. This policy is triggered not only if physical relocation occurs, but also by any loss of land resulting in: relocation or loss of shelter; loss of assets or access to assets; loss of income sources or means of livelihood, whether or not the affected people must move to another location.

Land acquisition for development of construction of public infrastructure like feeder roads will require careful adherence to international best practices followed by World Bank Group. In this regard, a separate **Resettlement Policy Framework (RPF)** has been prepared to guide on land acquisition and resettlement related exercises including compensations. The RPF outlines the principles and procedures to be applied in the event that any Project involves land acquisition and thus require the mitigation of potential adverse social impacts. Where there is land acquisition, impact on assets, and/or loss of livelihood, the RPF guidelines must be followed and a RAP completed prior to sub-project implementation. Where there are differences between Malawi 's legislation and the Bank 's operational policy, the latter prevails for the duration of project implementation.

4.6 Review of World Bank Environment Health and Safety Guidelines and Food Production

4.7 Summary of Main Approvals /Licenses Required for Project Areas

Based on reviews of the requirements of several other national policies and pieces of legislations in sections above, table below provides a summary of relevant statutory and regulatory approvals and licenses to be obtained in course of implementation and operation activities. This is to ensure that the project is in line with sound n environmental management practices and in compliance with other relevant pieces of legislation. The summary has been provided in table format for clarity purposes. Column one lists the required statutory approvals/licenses for the proposed project during implementation and operation, while column two outlines the legal and regulatory framework upon which the approvals/licenses are prepared. Column three outlines the government department or parastatals responsible for processing the applications for statutory approvals/licenses while column four outlines the designated public officer responsible for processing the applications for statutory approvals/licenses.

List of statutory licenses required for project implementation

| List of statutory approvals or licenses to be obtained | Regulatory frameworks. | Responsible department. | Responsible officer |
|---|---|---|--|
| 1. Environmental Impact Assessment Certificate <i>To guide the synchronization of environmental management practices.</i> | Environment Management Act (Cap 60:02) | Environmental Affairs Department | Director of Environmental Affairs |
| | | | |
| 2.Registration certificate for pesticide storage and use | Pesticide Act (2000) | Pesticide Control Board | Registrar of Pesticides |
| 3.Work Place Registration Certificate. <i>To guide on procedures on workers' environmental health, safety during project implementation and operations.</i> | Occupational Health, Safety and Welfare Act (Cap 55:01) | Ministry of Labor and Vocational Training | Director of Occupational Health, Safety and Welfare. |
| 3.Water rights for abstraction, <i>To regulate mechanisms of water abstraction from rivers during road construction.</i> | Water Resources Act (2013) (CAP 72.03) | National Water Resources Authority | Executive Director |
| | Water Resources (Water Pollution Control) Regulations | | |

CHAPTER FIVE: ENVIRONMENTAL AND SOCIAL SETTING OF MALAWI

Malawi is endowed with diverse natural resources, which include some of the most fertile soils, forest and water resources which accommodate diverse species of flora, fauna and fish resources. However, these resources are currently challenged by complex interaction of several factors which include the rapid rate of population growth with an annual rate of about 2.8%.

This study has identified that Components 1 and 2 under Malawi Agriculture Sectorwide Approach Project II have potential to trigger some negative impacts in the environment. The main sources of impacts would be from civil works during development/rehabilitation works. The use of pesticides on crops and livestock under would also pose some environmental and health risks to both human beings and biodiversity in the environment. All of the identified negative impacts can be reduced or in some cases avoided, with timely implementation of the mitigation measures outlined in this report.

The purpose of this chapter is to provide an overview of the conditions of this environmental and social situation in the country as a whole. This is necessary in order to understand the existing pressure and risks posed by the proposed rehabilitation/re-construction works on the already fragile environmental components of Malawi.

5.1 Physical Environment

5.1.1 Physiography and land resources

The physical configuration of Malawi is divided into five zones and these are: Rift valley floor, rift valley scarp, hill zones, plains and plateaus. The Rift valley floors consist of lakeshore plains and Lower Shire Valley. The Rift Valley Floor is among the rich agricultural regions of Malawi due to fertile alluvium soils. Other important agricultural regions are plains such as Lilongwe – Kasungu Plains and Lake Chirwa - Phalombe Plains. These areas contain latosols (red – yellowish soils). These soils support a range of arable crops including maize, tobacco, groundnuts and beans.

Total land surface in Malawi is about 9.4 million hectares. Land under water bodies is about 2 million hectares. Agricultural estates occupy 1.2 million hectares and the area potentially available for agriculture by smallholder farmers is approximately 6.5 million hectares after adjusting for wetlands, steep slopes and traditional protected lands as presented in the following table:

Table 1: An overview of Land Availability in Malawi

| | Million hectares | % | % of total |
|--|------------------|-----|------------|
| Total land area of Malawi | 9.4 | | 100 |
| Less national parks, forests and game reserve | -1.7 | | 18 |
| Land available for agriculture | 7.7 | | 82 |
| Land available for smallholder agriculture and estates | 7.7 | 100 | 82 |
| Land under estates | 1.2 | 16 | 13 |
| Land available for smallholder farmers | 6.5 | 84 | 69 |

Source: Malawi National Land Policy, 2002, page 7

Some official government estimates indicate that about 55% of the smallholder farmers have less than one-hectare of cultivable land, which does not meet their basic food needs. As a result, more than half of the population are unable to produce enough for food and cash such that the majority live below the poverty line of US\$495 per capita income annually. Much of the shortage of arable land for cultivation for smallholder farmers is widely felt and rapidly increasing in the Southern and Central regions of the country. Arable land is already problematic in districts in central and southern region of Malawi such that more than half of the population are unable to produce enough for food and cash hence the majority live below the poverty line.

(b) Land Tenure Regimes in Malawi

Malawi embraces the capitalistic ideals with regard to land ownership. There are five distinct land tenure classes existing in Malawi which are detailed as follows:

(i) Customary Land

This is land held in trust for all people of Malawi by the president, who delegates his authority to Traditional Chiefs. This constitutes about 75% of the total 9.4 million hectares of the land. The land is commonly held and distributed to the people by local chiefs. Although each person has recognized ownership to a piece of land, he or she cannot trade on it as the land can be reassigned to other people in case the Chiefs deem it fit. A coherent system in the distribution of land exists in both patrilineal and matrilineal societies.

(ii) Leasehold Land

This is part of private land that is leased by individuals or other legal residents. The lease period varies according to type of use that someone has applied for. Currently these fall into three groups of 21 years old leases for agricultural uses, 33 to 99 years old for property and infrastructure developments, and over 99 years old lease for those who would wish to sublease to tenants of 99 years. About 8% of the land in Malawi is in this category.

(iii) Freehold Land

This is land, which has been granted to persons for perpetuity. The government has no specific control on transactions except on planning permission on uses. This lease is now limited to Malawian citizenship only. It is difficult to enforce conservation measures on this land because of the exclusivity, which the persons enjoy, particularly some owners who live overseas.

(v) Government Land

This is public land is owned and used by government for public utilities, schools, hospitals, government offices and other properties, markets, roads, government irrigation schemes and other public goods throughout the country.

(vi) Public Land

Land managed by agencies of the government and Traditional Leaders in trust for the people of Malawi, openly used or accessible to the public at large. This includes catchments areas, protected forest reserves, national parks, game reserves, dambos, community forests, riversides, flood plains, wet lands, military sites and others.

Project activities under Malawi Agriculture Sectorwide Approach Project II will mostly cover Customary, Government and Public land. Customary land constitutes about 76% of agricultural land and supports over 4 million smallholder farmers.

5.1.2 Climate

Malawi's climate is influenced by proximity to the huge lake that covers almost two thirds of its entire length. The climate is tropical continental with three distinct seasons, the hot - rainy season from November to April, the cool-dry season from May to July, the hot dry season from August to November.

Annual rainfall in Malawi ranges from 700 to 2200 millimeters. Topography and proximity to the lake influence its distribution. Least rainfall (about 700-800 millimeters per year) is registered in rain shadow areas such as the rift valley, west of shire highlands, North West of Viphya and Nyika highlands. Moderate rainfall (800-1200 millimeters) occurs mostly in plains, which include Lilongwe – Kasungu Plains and West Mzimba Plains. Most of the arable and food crops are planted in this rainfall belt. High rainfall (1500-1900 millimetres per year) is experienced in high plateau areas such as Mulanje Mountains, Zomba highlands, Viphya and Nyika Highlands.

The mean annual minimum and maximum temperatures for Malawi range from 12 to 32 degree Celsius. The highest temperatures occur at the end of October or early November, but thereafter, the rains bring moderating effects. The cold periods are in June and July. Highest temperatures are recorded in the Shire Valley and along the lake shore while the lowest temperature are recorded over the high-altitude areas particularly the Shire Highlands, the Viphya and Nyika Highlands, Dedza and Mulanje highlands.

Over the last ten years, climate has been exposed to repetitive risks and shocks in the recent years which have necessitated increasing levels of humanitarian response to Malawi. The country has experienced floods and prolonged dry spells in most of the areas because of the occurrences of the La Nina and El Nino phenomena. This has also resulted in having unstable and unreliable water balance, especially if population is factored into the climate change paradigm. Therefore, in order to break the cycles of disaster and food security for greater developmental impact, the government has launched the National Resilience Master Plan. The agriculture and food security strategy of the Plan will focus on developing new irrigation schemes, diversifying agricultural production, promoting integration of smallholder farmers into agricultural value chains and promoting small scale agro processing.

Excessive rainfall has profound impact on environmental degradation in Malawi. Surface runoff enhances soil erosion. In this regard, risks of soil erosion would be high from construction works under Public Works Programme (PWP) during rainy seasons. Contractors and labourers have to schedule excavation works during the dry seasons. Additional erosion protection measures, including planting local species of trees, shrubs and grasses in the sensitive areas are recommended.

5.1.3 Water resources

Malawi's water resources are in two main categories namely: surface and ground water resources. Surface water resources are derived from rainfall. The rich surface water resources comprise a network of rivers and lakes that count for about 20% of the country's area. The dominant water body is Lake Malawi and the Shire River systems, which are interlinked since the Shire River serves as the only outlet of Lake Malawi. The drainage system is divided into 17 water resources areas.

Map 1 shows a network of main river basins, location of Lake Malawi and other lakes in Malawi. The following paragraphs reviews the conditions of river basins in some the 15 flood affected districts – part of the impact areas of the Malawi Agriculture Sectorwide Approach Project II.

In Northern Region, prominent rivers rise from Nyika Highlands and those which maintain good flows of water for some parts of the year include Lufira River, Hara River, Lunyina River, North Rukuru among others. However due to human settlement activities and encroachments along the riverines, most rivers are affected by soil erosion and siltation. As a result, most rivers indicate high flows during early to middle part of rainy seasons and most often flooding. Most rivers dry up by August of the year

In Central Region, main rivers rise from Dzalanyama Range and Dedza Hills. Examples of rivers are Linthipe River, Lilongwe River, Diamphwe River among others. Linthipe River rises from slopes of Dedza Mountain and it meanders wildly through the mountains. It has two main tributaries which are Lilongwe River and Diamphwe River in the middle. These rivers provide significant water flows to Linthipe River. Lingadzi River

rises from Dowa Hills and flows down to Domira Bay at Lake Malawi. In some parts during the rainy seasons, Linthipe and Lingadzi Rivers overflow and cause flooding in Salima due to high flows from upstream.

In Ntcheu District, Bwanje valley is annually affected by floods due to overflowing of Bwanje River and its tributaries. The River and its tributaries drain from Bangwe Mountains within Kirk Range. Bwanje River flows through an extensive plain all the way into Lake Malawi on northern part of Ntcheu. Due to human settlement activities and encroachments along the riverines, most upper parts of river courses are affected by soil erosion and siltation. As a result, most rivers indicate high flows during early to middle rainy seasons and cause flooding downstream.

In Southern Region, main rivers rise from Kirk Range and Shire Highlands (including Zomba and Mulanje Mountains). Rivers from Kirk range include Lisungwi, Wankulumadzi, Mwanza and Mkodzi wa Fodya Rivers which drain into Shire River. Other rivers from Shire Highlands include Lunzu and Lukhubula Rivers. All these rivers drain through areas of poor vegetation, high land degradation and low rainfall. Consequently, rivers are high laden with debris and silt.

Mulanje Mountain is the source of important perennial rivers which drain into Shire River. These include Thuchila and Ruo Rivers. Just like the case in other river basins, Thuchila and Ruo Rivers are heavily affected by soil erosion and siltation due to tea cultivation, high population pressure and encroachments along the riverines. Floods are more frequent along Ruo River and they take different forms. In some cases, especially in the flat areas such as Makhanga flooding causes total inundation of homes and infrastructure.

National Environmental Plan of Action (NEAP, 1994) highlights that hydro chemistry of the majority of the surface resources in Malawi is alkaline earth (calcium and magnesium) delineated by the cation group and by carbonate system in the anion group. Most of the surface waters are classified as soft, to moderately soft. The microbiological quality of most major rivers is generally poor all the year round especially those that are draining through cities and towns. Typical count of faecal bacterial colonies range between 50 to 100 per 100 millimeters of sampled water. The physical quality of surface water is also affected by human activity occurring in various catchment areas. High-suspended solids are found in most of the surface water bodies. High population growth has forced people to cultivate marginal areas, to clear vast expanses of land for tobacco, other crops and livestock farming. This has resulted in excessive soil erosion, loss of soils fertility, destruction of catchment areas, and loss of biological diversity and the natural resources base.

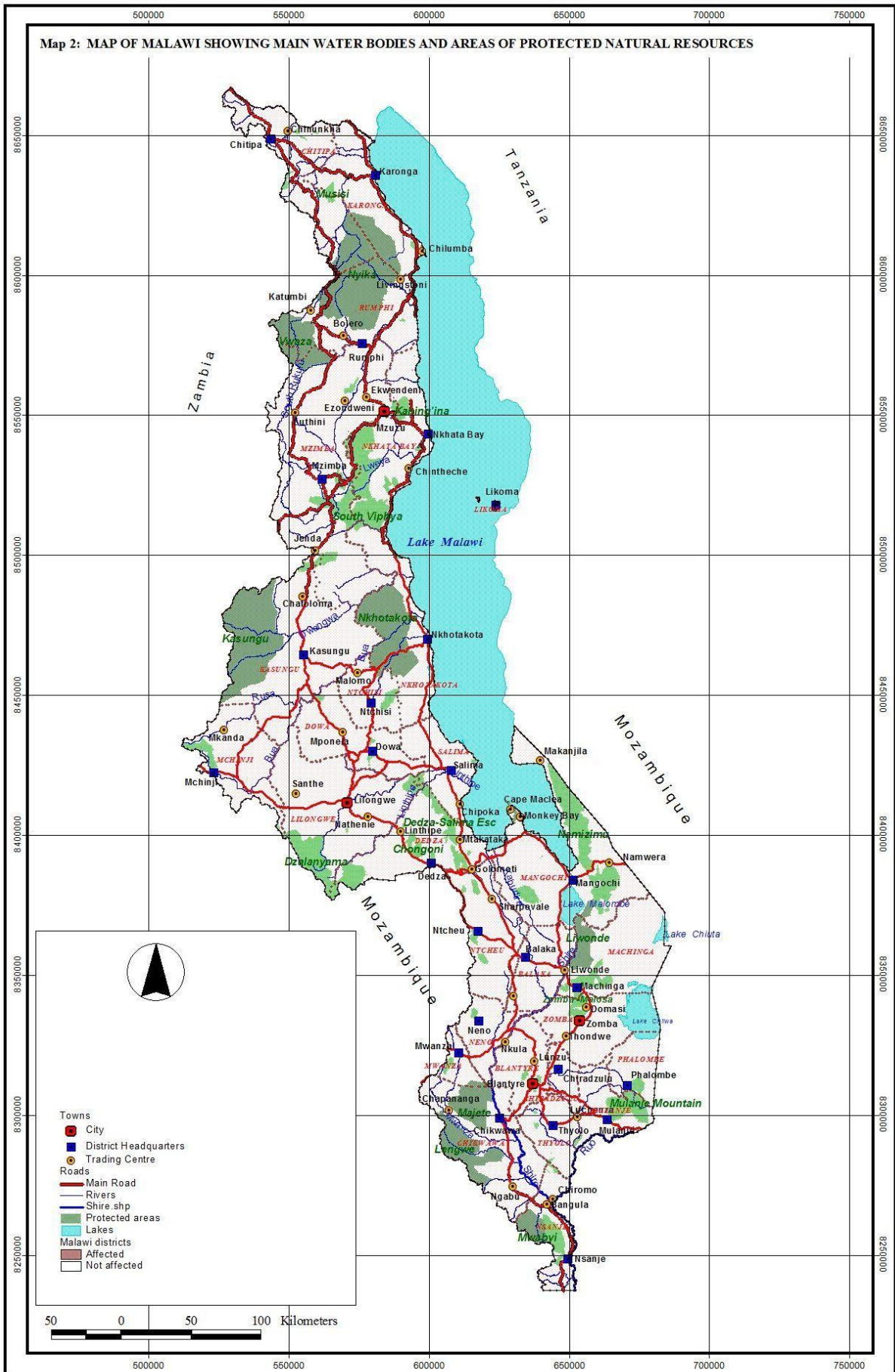
Malawi has some important wetland ecosystems. Examples of wetlands in flood affected districts include the shorelines plains of Lake Chilwa, and Lake Chiuta, a diversity of Dambo ecosystems, and the Elephants and Ndindi Marshes in the lower Shire Valley.

Wetlands are the habitats of important plant and animal species such as birds in the Lake Chilwa plains, and the elephants in Ndindi marshes. In addition, the wetlands form some sheltered fish spawning, nursery grounds and as habitat for adult fish. Recently, annual floods have negatively affected the biological diversity of wetlands through wash aways and water logging.

In context of water resources, significant negative impacts would be from civil works on rehabilitation and construction of rural roads through the labor-intensive works which can lead to loosening of soil and consequently soil erosion during the rainy season as well as soil erosion from the farmers' fields and subsequent siltation in surface drains, streams and rivers. In addition, increase in use of harmful pesticides (on the different crops) may enhance pollution of water in rivers around the fields.

Environmental and Social Management Plans have to be put in place address negative impacts such as soil erosion and siltation of rivers.

Map 2: MAP OF MALAWI SHOWING MAIN WATER BODIES AND AREAS OF PROTECTED NATURAL RESOURCES



5.2 Biological Environment

5.2.1 Vegetation resources

There are various vegetation types in Malawi. However, the common type is Dry Savannah Woodland which extends within the rift valley region. Some parts of the area (such as Karonga, Balaka and Chikwawa) this vegetation type has been modified by grazing of livestock. Existing indigenous trees of economic importance (within this vegetation type) within the area are follows: *Acacia nigrescens*, *Pterocarpus brenanii*, *Comretum ghasalense*, *Sterculia Africana*, *Acacia tortilis*, *Bauhinia petersiana*, *Dalbergia melanosilon*, *Adansonia digitata* and *Faidherbia albida* among others. There are also different grass species and shrubs within this vegetation.

In lakeshore areas, *Faidherbia albida* and baobab trees are specially maintained and conserved in smallholder farmers' gardens of local households. *Faidherbia albida* is an important agro forestry tree species and is known to enhance soil fertility through humus of shaded leaves. Trees shade leaves during rainy seasons, and humus from the leaves fixes nitrogen nutrients in the soils. The fact that the trees are leafless during rainy season minimizes competition from sunlight with crops and protects them from birds until harvest time. During field consultations, it was learnt that leaves and pods of this trees are good fodder to livestock during dry seasons. Some *Faidherbia albida* trees are used for fuel wood and construction materials by local communities.

Baobab is also an important tree to local communities. One economic use is supply of fruits which local people eat while fresh or dry. The fruits are also sold and used for production of high value juices by local manufacturers in the area. Leaves of Baobab trees are used as sources of delicious relish and traditional medicines by some local people in some of these floods affected districts.

Potential implications of the proposed Malawi Agriculture Sectorwide Approach Project II to vegetation in the country would be mainly in cutting down trees to pave way for development of new fields and the increase in demand for firewood and charcoal by the project workers. Demand for firewood and charcoal would escalate the existing high rates of deforestation in the flood affected districts.

5.2.2 Forest Reserves

Available government information estimates that about 28% (2,632, 000 hectares) of the total land area of Malawi can be broadly classified as forest land covered with vegetation. Out of these forest resources, 16,000 hectares constitute plantations and woodlots. There are 85 protected forest reserves covering about 1, 109, 626 hectares. There are also 40 proposed forest reserves which cover about 154,137 hectares. In addition, 800,000 hectares are natural woodlands on customary land. Map 1 highlights some main forest reserves in Malawi.

Forest reserves on customary land are under pressure because it is annually being depleted at a rate of 1.6% (50,000 hectares) because of opening of new gardens, estates, overgrazing, and building infrastructure such as roads, settlements and bush fires. This has led to deforestation and land degradation which have far reaching effects on living standards on the people. This situation has been aggravated by high annual population growth rate of over 2.4%

Forest reserves are a vital natural resource in Malawi. They supply 90 percent of the country 's energy needs and provide timber for construction and other industrial use. Forests help maintain air, soil and water quality; influence biochemical processes; regulate run-off and groundwater, reduce downstream sedimentation and the incidence of flash flooding in addition to controlling soil erosion; provide watershed protection and enhance water resources. About half of Malawi 's forest cover is on customary land, owned but the local communities. The extremely high reliance on biomass for energy needs imposes heavy strains on the biological diversity of the forest ecosystem in the country. A commitment to conserve the biological

diversity and the natural resource base in Malawi is enshrined in the Constitution of Republic of Malawi under section 13 paragraph 4d (v). The forest resource base is being rapidly depleted by firewood and pole extraction, land clearing for cultivation and felling of high-grade timber species. This is big threat to sustainable agriculture development in Malawi. As such, sustainable management and conservation of the forest ecosystem is imperative.

5.2.3 National Parks and Game Reserves

Malawi has six protected wildlife reserves. These are Nyika National Park in Rumphi, Lake Malawi National Park in Mangochi, Liwonde National Park in Machinga, Majete Game Reserve and Lengwe National Park in Chikwawa and Mwabvi Game Reserve in Nsanje. Location of all these eight wildlife areas is shown on Map 1. During field surveys and consultations, three wildlife reserves have been affected by floods in 2015 and these are Liwonde National Park, Lengwe National Park and Mwabvi Game Reserve. The effects are water logging and closure of service roads and access routes of wildlife within the parks. During field surveys, it was noted that government is at advanced stage of undertaking rehabilitation of roads and access roads within Liwonde National Park, Lengwe National Park and Mwabvi Game Reserves. New gravel roads will be constructed soon after rainy season and the exercise will address some of the challenges caused by the floods.

Nyika National Park - located on plateau in Rumphi - has not been affected by floods. Plateau area has montane vegetation. The grasslands of are rich in wildflowers all through the year. The escarpments and northern hill areas descend to lower altitude and feature a much drier landscape. Vegetation within escarpments and hills is dominated by *Brachystegia* woodland. Zebra and Elephants are often seen anywhere on the plateau. The park has over 400 species of bird have been recorded in the park. Common species include Denham's bustard, wattled crane and red-winged francolin - endemic .

Lake Malawi National Park has not been affected by floods. The park has over 500 fish species of which 350 species are endemic to Malawi. The lake contains 30% of all known cichlid species. Mammals include hippo, duiker, baboon, velvet monkey, bush pig, warthog and occasional elephants. The park is rich in birdlife including fish eagle along the shoreline.

Liwonde National Park includes parts of Upper Shire. There are reed swamp and marshland along the Shire River and southeast shore of Lake Malombe, floodplain grassland in the south, mixed woodland on all the hills, tall grass tree savannah along the narrow floodplains of seasonal streams, small pockets of semi-deciduous riverine forest..

Common wildlife include: elephant, hippo, impalas, waterbucks, warthogs, velvet monkeys, yellow baboons, bushbucks and kudus In the mopane woodland there are several hundreds of sable antelopes. Predators include lions, leopards, serval, and genet . In addition, the Park, has considerable water – associated bird species and these include African fish eagle, the Pied kingfisher, the Saddle-billed stork, Goliath heron, Red-necked falcon, Palm-nut vulture and White-backed night heron.

Lengwe National Park is regularly affected by floods due to poor drainage. Water logging is common during rainy seasons. Water logging affects service and access roads and movements of both tourists and wildlife. The park is the home of Nyala antelope, elephants, kudu among others. Climate is hot and dry, and the only source of consistent water is from the rain. Many man-made water holes have been constructed to attract and maintain the animal population.

Mwabvi Game Reserve has been affected by floods due to overflowing of streams within the wildlife reserve. The reserve has a wide variety of habitats, including Mopane, and *Brachystegia* woodland.

Improvements in protection and conservation of flora and fauna has been carried out over the last 8 years. The improvements have in turn supported increase in numbers of wildlife including herbivores and birds. Examples of common herbivores are impalas, hippopotamus, velvet monkeys, yellow baboons, bushbucks, sable antelopes and kudus. Carnivores found in the park include lions, jackals, serval and leopards, although these are not as abundant as herbivores.

There are a number of problems faced in the management of national parks and game reserves in Malawi. These include the shortage of trained staff and resources (vehicles, equipment) for effective monitoring poachers and wildlife migration. In addition, lack of adequate funding for management of parks and game reserves has resulted to inadequate control of poachers and other external threats. The other problem emanates from some wildlife such as hippos, elephants and buffaloes which tend to move out of the park for greener pastures in gardens along the parks. Elephants move around to eat green crops such as winter maize, beans and vegetable. Such incidences create serious conflicts with local communities. There are a number of external threats to the management of the park. One major threat is the pressure from poachers who target elephant for ivory, and duikers and kudus for bush meat. The second problem relates to increase in deforestation as a result of firewood extraction and charcoal making by local people around the park.

This study has reviewed the scope of project activities, and has identified that the main issues which can generate negative risks to flora and fauna are the construction of roads which would enhance extraction of firewood and charcoal within national parks and game reserves. The malpractices would enhance deforestation the Park.

5.3 Socio-Economic Environment

5.3.1 Population and Human Settlements

The estimated population of Malawi (2017) is 17.8 million, and the annual growth rate is 2.9%. Children under the age of 18 years constitute about 50% of the population size which indicates high dependency ratio. Females are about 53% of population while males are about 47% of the population. About 85% of the population live in rural areas and depend on smallholder farming while only 15% of the population live in towns where as much as 75% of the urban population live in poor peri-urban and informal settlements

National Population density is 148 people per square kilometer. Population densities are among the highest in Malawi, ranging from 160 to Southern Region and Central Region of Malawi have about 88 % of the population in Malawi. The Shire Highlands, Lilongwe – Kasungu Plains and Lake Chirwa Plain have among highest population densities in Malawi, ranging from 200 - 350 persons per square kilometre.

The rate of population growth, density and distribution in a country have direct effects environment. Intensive and large scale human settlements enhance land degradation, natural resource utilization and depletion in incidences on excessive extraction. Infrastructural developments (water pipes, sewerage pipes, roads) have potential to negatively affect the environment. In this regard, understanding human settlement and socio-economic development is essential in environmental management.

Main urban areas in Malawi are: City of Lilongwe (capital city, about 1000,000 people), Blantyre (commercial capital, about 800,000 people), Zomba City (about 200,000 people) and Mzuzu City (estimated population of about 220,000 people). The majority (about 70%) in urban areas live in unplanned settlements, where there are inadequate services. Quality of housing in unplanned settlement is quite poor. Poor quality of housing is also visible in most rural areas. Population and Housing Census (2008) results on Malawi 's housing indicates that housing structure in Malawi consists of 43% as traditional housing, 34% semi-permanent housing and 23% as permanent housing. Main building

materials for permanent houses are burnt bricks, iron sheets, tiles, concrete or asbestos for roofs. The semi-permanent houses are built of sun dried bricks and grass thatched while traditional house is built of mud walls and thatched roof. Major environmental problem in urban areas in human settlement is the existing of high density slums/squatter settlements. It is estimated that about 70% of urban population live in unplanned settlements where housing conditions are quite poor characterized by poor sanitation, lack of potable water, poor roads among others. Other major environmental problems in urban areas include indiscriminate disposal of solid wastes and liquid wastes.

5.3.2 Governance and Development Planning

Malawi has two set of governance structures – central government and local government. Central Government is run by Cabinet headed by The President while local governments are run by local councils. Central government runs various line ministries including Ministry of Agriculture, Irrigation and Water Development. Office of President and Cabinet oversees the operations of central government. Ministry of Finance and Economic Planning coordinates central government economic development planning.

The overall local government institution at local level is the District council. A district council coordinates local development planning in districts. A district council in Malawi is a political structure and is composed of elected councilors from wards of the districts, members of Parliament, traditional authorities from the districts and some appointed persons representing some special interests within the districts. Local councils perform functions through various committees and these include: Planning and Development, Education Committee, Development Committee, Public Works Committee, Health Committee, Finance Committee among others. Two important decentralized structures include Area Development Committee and Village Development Committee. Area Development Committees are located in Traditional Authorities (T/As).

Local councils prepare local development plans and these cover various development sectors. Area Development Committees collaborate with councilors, traditional leaders and Members of Parliament in the area to coordinate local development activities within the project area.

The T/A supervises village headmen/ headwomen, who in turn oversee local people. The responsibilities of the both the village headman and traditional authorities include administration of customary land among the subjects, spearheading development activities and mobilizing community participation in development programmes, keeping law and order among their subjects Both villages and traditional authorities have structures within which they perform their functions.

A District Council secretariat is headed by the District Commissioner who supervises a number of Departments. These include Planning and Development, Administration, Education, Environmental, Health, Forestry, Fisheries, Community Development, Agricultural Development and others. The District Commissioner and district heads of departments form the District Executive Committee (DEC) within the district. The DC also coordinates strategic planning for all government departments in the districts. The Council performs a number of functions and those related to the project and to environmental concerns are as follows:

- promotion of environment sanitation,
- provision of and maintenance of water supplies in liaison with the Ministry of Irrigation and Water Development.
- preservation of the environment through protection of forests, wetlands, rivers and streams.

Local implementation of projects is carried out through extension workers such as Community Development Assistants, Agriculture Extension Development Officer, Senior Forest Assistants, and Primary Education Officers. These extension workers work within their demarcated zones such as Extension Planning Areas (EPA).

There are various Non - Governmental Organizations (NGOs) and Community Based Organizations (CBOs) which work in both rural and urban areas in Malawi. Most NGOs work in areas of community development, education, HIV/Aids interventions, social welfare, environmental management, forestry, water supply and sanitation among others. Some prominent NGOs are: Water Aid, Plan Malawi, Habitat for Humanity, Concern Universal (United for Purpose), Care International, World Vision International, Total Land Care, and National Initiative for Civic Education (NICE), NASAFAM, and Catholic Commission for Development, Save Children Malawi, Youth Net and Counseling among others. NGOs play important role in service delivery to vulnerable communities and households in Malawi. Non-governmental Organization operate under Trustees Incorporated Act and NGO Act (2001).

Malawi Agriculture Sectorwide Approach Project II will be implemented through decentralized framework. The District Council with technical support of District Agricultural Development Officer (DADO) will play critical role in implementation of activities and environmental and social safeguards.

5.3.3 Economic Environment

The economy of Malawi is predominantly agricultural, with about 90% of the population living in rural areas. The landlocked country in south central Africa ranks among the world's least developed countries. Agriculture accounts for 29% of GDP and 85% of export revenues. The economy depends on substantial inflows of economic assistance from International Monetary Fund, the World Bank, and individual donor nations. The government faces strong challenges: to spur exports, to improve educational and health facilities, to face up to environmental problems of deforestation and erosion, and to deal with the rapidly growing problem of HIV/AIDS in Africa.

Agriculture represents 37% of GDP, accounts for over 80% of the labor force, and represents about 80% of all exports. Its most important export crop is tobacco, which accounts for about 70% of export revenues. In 2008 the country was the tenth largest producer in the world. The country's heavy reliance on tobacco places a heavy burden on the economy as world prices decline and the international community increases pressure to limit tobacco production. Malawi's dependence on tobacco is growing, with the product jumping from 53% to 70% of export revenues between 2007 and 2008. Rural poverty stands at 56.5% compared to urban poverty at 25%.

Other important exports are tea, sugarcane and coffee. These crops are grown in commercial estates/plantations. Sugarcane is grown and processed by Illovo Sugar Group on its two large irrigated sugarcane estates at Nchalo in Lower Shire Valley and Dwangwa Sugarcane Estates in Nkhotakota District. Exports from sugar, tea and coffee constitute about 20% of Malawi 's exports. Most of tea is grown in Mulanje and Thyolo.

Malawi has few exploitable mineral resources. An Australian consortium exploits uranium in at Kayerekera uranium Mine near Karonga. Coal is being extracted at various sites including Mchenga Coal Mine and Eland Coal Mine in Rumphi District. Malawi's economic reliance on the export of agricultural commodities renders it particularly vulnerable to external shocks such as declining terms of trade and drought.

Malawi's manufacturing sector contributes 18.9% to the national GDP. Malawi's manufacturing industries are situated around the city of Blantyre and City of Lilongwe. Main sectors are food processing, construction, consumer goods, cement, fertilizer, ginning, furniture production and cigarette production.

According to the Post – Disaster Needs Analysis (PDNA) report, the effects of damages and losses are estimated to result in a projected negative impact on GDP growth in 2015, to the tune of 0.6 percent. The economic costs resulting from the negative impact of the floods, other things being equal, may thus lead to GDP growth falling short of the 5.8 percent projection set for 2015. Economic growth is largely

premised on expansions in agriculture, manufacturing, wholesale and retail trade, utilities, and transport sectors, most of which have been directly or indirectly adversely affected by the floods.

5.3.4 Transport Infrastructure.

The transport sector in Malawi is comprised of four sub-sectors, namely roads, rail, water and air. Road transport is the dominant mode of transport on land due to the flexibility allowed to users in reaching remote areas. Road transport handles more than 70 percent of the internal freight traffic and 99 percent of passenger traffic. Accessibility in rural areas has remained a challenge in Malawi due to the condition of the rural roads, which are mainly comprised of secondary, tertiary, district and community roads. The total road network covers 15,451km, of which 28 percent is paved, while the rest constitutes of either earth or gravel roads.

The Roads Authority has the mandate of overseeing the maintenance, rehabilitation and upgrading of main, secondary and tertiary roads in Malawi. District and community roads are administered by District councils but the Roads Authority still assists the districts in providing rehabilitation and maintenance services due to the Councils' lack of capacity. The Government of Malawi is currently implementing several programs, including the Agriculture Sector Wide Approach Support Project to address challenges related to the transport sector. The main interventions in the Project 's roads component is to provide access to areas that have agricultural potential.

Existing transport sector challenges have been aggravated by sporadic floods, which have wash away bridges, drainage structure and road sections, thereby isolating people from their socio-economic amenities, including schools, hospitals and others. The majority of the unpaved network lies in rural areas where the flood disaster has had the strongest effect. The Lower Shire has been the most affected.

Government is currently undertaking country wide road upgrading and rehabilitation of several main roads and secondary roads. Some road upgrading works are support by European Development Fund, African Development Fund and World Bank funded project.

5.3.5 Health Situation and HIV & Aids Prevalence.

Available government statistics highlights poor health indicators on infant and material mortality rates in the country. Malawi infant mortality rate in estimated at 92 per 1000 live birth, child mortality rate is 133 per 1000 live births and maternal mortality rate is 684 per 100,000 live births. Leading causes of death include HIV/Aids related ailments, malaria, pneumonia, anemia, diarrhea and malnutrition. Malaria accounts for about 50% of monthly outpatient visits in Malawi.

Health services in Malawi general are provide by government through Ministry of Health (about 65% coverage), Christian Health Association (CHAM) which covers about 30% of the country. Government has district hospitals (except Phalombe) and health centers. However, in some rural parts of districts, reliable health facilities are those under Christian Health Association. Currently main challenges facing health facilities are shortage of drugs and health workers. One of main cause is inadequate funds to purchase drugs and low salaries which cannot motivate health workers.

The National HIV and Aids Policy (2012) highlights that HIV/Aids impacts on the country is quite significant and affects a range of socio-e-economic activities be it in agriculture, fisheries, public sector, private sector, tourism, urban areas, rural areas among others. HIV and Aids prevalence in the country varies from one region to the other and from rural to urban areas. Current rates (2014) indicate that highest rate is in the Southern Region at 15.18%, Central Region at 9.42% and lowest in Northern Region at 6.58%. Prevalence rate is 13.1% in urban areas and 10.61% in rural areas

National HIV/Aids Policy identifies migrant workers (mobile population) and women are among highly vulnerable people to transmission of HIV and Aids and other sexually transmitted infections.

There is a risk of increased spread of HV/Aids and sexually transmitted diseases during project implementation due to enhanced financial status arising from increased productivity. This may result into long term negative impact at local level. The impact is of high significance. With mitigation measures, the impacts can be reduced to low significance. Recommended mitigation measures include: (a) prioritize HIV and AIDS awareness and sensitization for behavioral change, (b) periodic distribution of both female and male condoms, (c) mainstreaming of the Agriculture Sector HIV and AIDS Work Place Policy and dissemination in the implementation of the project.

CHAPTER 6: STAKEHOLDER CONSULTATIONS, PUBLIC DISCLOSURE AND GRIEVANCE REDRESS MECHANISMS.

6.1 Public Consultations

Procedures for project environmental assessment in Malawi and World Bank Safeguard policies require that adequate and informed consultations be carried out during preparation of environmental and social management framework. Consultations are supposed to provide opportunity for stakeholders/project affected persons to air views/concerns on project activities and contribute to design of project and development of appropriate plans for sustainable management of environmental and social risks during implementation. Consultations also help to avoid possible conflicts or misunderstandings on the potential negative risks and also offer measures for addressing concerns. In addition, consultations help to identify enhancement measures for positive impacts.

In order to undertake informed consultations, it is necessary that the participants of the consultations are provided with all the details of the project. Information provided therefore includes: nature and scope of the project, proponent, main components, period of implementation, potential positive and negative impacts among others.

In carrying out consultations for environmental and social management framework for Malawi Agricultural Sector wide Approach Support Project II, the Project Secretariat carried out a series of consultations with different stakeholders. These include local people, farmers in selected districts, local government officials, extension workers, local leaders, non—governmental organizations and central government officials. The consultations took place on 24th October 2017 in Lilongwe and Ntchisi. The structure of the consultations was such that the consultations were made with senior officials at various government ministries and departments. These included mostly those from the Ministry of Agriculture, Irrigation and Water Development; selected non-governmental organizations and Civil Society Organizations in selected non-governmental organizations and consultations with extension workers and lead farmers. The list of people and institutions consulted is presented as Annex 4.

6.2. Summary of the Discussions

Discussions centered on the aims and objectives of the project, the scope of the project, design and modalities of implementation. More issues were raised during consultation with farmers as opposed to agricultural officials. Farmers acknowledged that the project will improve their livelihood through increase of income acquired through Public Works, access to productive resources such as seed, fertilizers and pesticides. However, concerns were raised regarding negative impacts that the project may consider addressing:

Deforestation

Farmers noted that trees could be affected in some roads that may be recommended for widening. They suggested including activities to replace fallen trees.

Soil erosion

Soil erosion is expected to be experienced because productive agricultural lands may be used. Farmers expressed that their fields have been experiencing top soil losses because of erosion. This has negatively impacted production of their fields. Vetiver grass will be planted to control erosion and implement other soil conservation technologies like contour ridging;

Siltation of water bodies

Siltation of watercourses and dams has been experienced in the past. As time has progressed, farmers have seen that some perennial rivers have become seasonal due to siltation and sedimentation. There is vegetative growth in rivers hence drying up. It was suggested that trees/reeds be planted along river banks, construction of check dams, contour ridging as well as implementation of good agricultural practices;

Risk of farm land loss

The farmers noted that if works involve only rehabilitation of existing roads, no significant negatives could be expected. However, if new roads are will be constructed – farmers' fields may be affected as the roads will pass through the fields thus reducing the size of the farmland and hence affecting their production – livelihoods. In response, it was explained that there will not be new road constructions, however, suffice to mention that detours/diversions could be recommended in some cases. These may affect fields; woodlots and dwelling units. The community should understand that there are procedures being outlined in Resettlement Policy Framework (RPF) to determine compensation depending on how a member is affected. A survey, as recommended in RPF, will be undertaken when the roads have been identified and hence determine affected people and the type of compensation to be provided. It is expected that the affected farmers will be compensated accordingly, without compromising their livelihood.

Delayed Payments

Farmers also noted that in some instances the payments are received very late beyond the dates which were communicated to the communities. They requested for a proper procedure so that delays should be avoided. The facilitator of the meeting noted the issue and also introduced Grievance Redress Mechanism (GRM) provided for in the ESMF, in case such issues arise. However, it was promised that the issue will be incorporated in the design of the public works activities so that it is addressed;

Transparency in beneficiary identification

Some local leaders register family members who have not been involved in the actual works under the PWP for payment and the communities are afraid to report the malpractice because it starts with the local leadership – this was also noted and it was pointed out that instruments developed will look into all these issues

Possible contact with Physical and Cultural resources

Farmers mentioned that they do not expect the project to affect cultural sites but appreciated that measures have been included in the preparation of the project to take care of such issues.

The issues raised during consultations will be incorporated in ESMF action plan and in site specific ESMP. A detailed record of these discussions is attached as Annex 3.

6.3 Public Disclosure

Public disclosure of the project is important in order to allow stakeholders/public appreciate the impacts of the project on their lives and environment. Project disclosure can take place during feasibility stage or planning stage or implementation stage. Disclosure of the project activities helps to disseminate widely environmental and social management of issues in a project, also as a way to gather wider views on the project and enlist support from local communities. Among others public disclosure of the project has to cover rationale of the project, nature of the project, period of implementation, areas of implementation, potential impacts and proposed mitigation measures.

Public disclosure for Malawi Agriculture Sectorwide Approach Project II will follow several stages through various stages and means. These include:

- a) Briefs by government officials to news reporters and district information officers at district consultative meetings and briefs to local leaders and non-governmental agencies.
- b) Presentation, briefings and debates in Malawi's National Assembly sometime in May 2018. The presentation and debates will help members of Parliament and local people to know more about Malawi Agriculture Sectorwide Approach Project II and why government of Malawi planned the project activities.
- c) Another important public disclosure is through radio announcement. Government officials will publicly announce through radio and Malawi Broadcasting Television regarding Malawi Agricultural Sectorwide Support Project II.
- d) Some members of public will be informed of the project through distribution of the project documents in District Commissioner 's offices, libraries in towns and districts.
- e) The Environmental and Social Management Framework, a Biodiversity Management Plan, Resettlement Policy Framework, Integrated Pest Management Plan and the Terms of Reference for Archeological Chance Find will be posted on websites for various government agencies and World Bank Info. The arrangement will allow more people access information on the project and make informed views and opinions. Other appropriate dissemination methods like making available copies at District Councils will also be used to ensure that the local communities are able to access these instruments.

6.4 Grievance Redress Mechanisms on Sub-Project Activities

Implementation of projects activities under Malawi Agriculture Sectorwide Approach Project II will take place in various locations of the targeted districts. Implementation of the activities may generate a number of challenges and complaints especially to those which relate to infringement of rights of sections of the society. Examples of complaints are not known at present though in the improvement of roads these can include: objections to use of someone 's land during emergency detours or encroachment on private land; while the examples of grievances may include: dissatisfaction with amount of compensation and, dissatisfaction with size and nature of land replacement. Such grievances are likely to crop up in one way or another in implementation sub-projects under Malawi Agricultural Sectorwide Approach Support Project II. The communities will ensure that resettlement related grievances should be addressed during the identification and appraisal of sites.

Proper channels of grievance redress mechanisms will be put in place, and the project affected people sensitized to make use of them as well as contribute to the solutions to the grievances raised. The process of grievance redress mechanisms will involve project grievance committees, informal courts handled by traditional leaders (village headmen, traditional authorities) and also formal courts within the judiciary. The following paragraph highlights four main grievance redress mechanism:

a) Project Grievance Redress Committee

Project Implementation Unit will ensure that implementation mechanism of each sub-project under Malawi Agriculture Sectorwide Approach Project II has a project Grievance Redress Committee. The committee will be the first reference point of issues which crops from activities on the site. The committee will be composed of chosen representative of key stakeholders in implementation of sub-project. The committee will operate within framework and timeframe of project cycle. The committee will be set up to address some issues/cases related to activities. The committee will also be responsible for referring some cases/issue to relevant oversight bodies.

Project Grievance Redress Committee will ensure that user friendly mechanism is put in place to ensure that vulnerable people are taken care of. Some simple procedures will be developed and communicated to the public. Some procedures will include the following:

- i) Venue of meetings to be closer to the project site or site convenient to the project affected people;
- ii) Project Managers to disclose all data and information from safeguard documents;
- iii) Complainants must agree a reasonable time to go through both environmental and social safeguards plans Project affected households to provide feedback within specified time;
- iv) Complainants can submit a complaint or dispute orally or through phone or through a simple letter;
- v) The submission can be in any local language or Chichewa or English languages;
- vi) All complaints to be submitted through their local leader or civil society organization;
- vii) Project Managers or government to provide feedback to all complaints/disputes within 5 days from date of Grievance Redress Committee;
- viii) Complainants to be informed that in case of unsatisfactory response/resolution for Grievance Redress Committee, they can seek redress from Judiciary.
- ix) Complainants to be informed that in case of unsatisfactory response from Grievance Redress Committee, they can seek redress from World Bank Redress Service. The Office of submission of the complaint is:

Country manager,
World Bank Malawi Office,
Mulanje House,
Off Presidential Highway,
City Centre,
Lilongwe 3.
Phone 01 770 611.

b) Traditional courts

Traditional courts are community based tribunals and operate in form of primary justice. Traditional courts are based in each local village in the country. When complaints/disputes related to project arise, the matter will be referred to a village head of the area. The village head will organize a village tribunal to preside on the matter. Both parties in complaints/cases will be called to be heard. When one party is not satisfied with the decision at village headmen level, the complaint can be taken up to group village headmen. Similarly, that party not satisfied with decisions on complaints at that level, can take the matter to traditional authorities (T/A) for public hearings. In most cases/ complaints of this nature are sorted out at traditional authority level. However, those who are not satisfied with the verdict will be allowed to appeal to the District Commissioner (DC) of the district. Further appeals can be made to the central government. In this regard, the matter can be referred to one of the line ministries (Ministry of Lands, Housing and Urban Development, Ministry of Labor, Ministry of Local Government and Rural Development) on the matter of dispute which may give direction on the existing policy to be implemented.

c) Formal Courts

Formal courts include magistrates, High Court of Malawi and Supreme Court of Malawi. These courts handle both civil and criminal cases. In regards to complaints and cases during Malawi ASWAp-SP II, people with complaints will have opportunity to take cases to these courts for review and determination on course of action. Such cases may include review of amount of compensations, cases theft of valuable property as well as beating each other. Magistrate courts are located in all 15 flood affected districts and these would help complainants to access the services of these magistrates in case such needs arise.

d) Access to World Bank Grievance Redress system

Malawi Government will also ensure that communities and individuals in project locations are aware of World Bank Grievance Redress System. Government will disclose simple system of submitting issues of concern through website or letters. People who believe that they are adversely affected by project activities carried by contractors or communities may submit complaints (through letters/phones) to Grievance Redress Service (GRS) World Bank Malawi office. The letters would be reviewed by offices. The system ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may also submit their complaint to the Bank 's independent Inspection Panel, after having brought the complaint to the attention International Development Association through Malawi Country Office. Information on how to submit complaints to the Bank 's Grievance Redress Service and the Bank Inspection Panel will be disclosed to the public during public disclosure of Environmental and Social Management Framework.

CHAPTER SEVEN: ENVIRONMENTAL AND SOCIAL SCREENING PROCESS FOR SUB – PROJECTS

7.1 Introduction

The Malawi Environment Management Act (1996) and the Guidelines for Environmental Impact Assessment in Malawi (1997) prescribe steps for Environmental Impact Assessment for development projects in Malawi. However, these instruments do not contain guidelines regarding the screening, identification, assessment and mitigation of potential localized impacts of small-scale investments, where the project details and specific project sites are not known.

Environmental and Social Screening Process outlined below complements Malawi 's EIA procedures for meeting the environmental and social management requirements, as outlined in Appendix C of Guidelines of Environmental Impact Assessment in Malawi (1997). The Environmental and Social Screening Process also meets the requirements of the World Bank 's OP 4.01 Environmental Assessment for small to medium scale projects. It provides a mechanism for ensuring that potential adverse environmental and social impacts of public works funded sub-projects are identified, assessed and mitigated as appropriate, through an environmental and social screening process. In this way, the results of the screening process can complement the national environmental assessment process.

7.2 Purpose of Environmental and Social Screening

Since the specific details and locations of the new construction and rehabilitation works are not known at this time, the environmental and social screening process (the screening process) is necessary to guide review and approval of the engineering plans, for the rehabilitation of existing roads, construction of bridges and curvets. The objectives of the screening process are to:

- a) Screen sub-projects/activities for environmental and social impacts.
- b) Identify safeguards policies that have been triggered;
- c) Assign environment category to the project;
- d) Determine specific instruments that need to be prepared to respond to triggered safeguards policies.

7.3 Steps in Environmental and Social Screening of the Projects

The extent of environmental work that might be required, prior to the commencement of construction/rehabilitation of rural feeder roads and rehabilitation of the sub-projects will depend on the outcome of the screening process by District Environmental Sub Committee described below.

Step 1: Screening of Sub-Project Activities and Sites

The first exercise is desk appraisal of the construction and rehabilitation plans, including infrastructure designs. This will be carried out by the PIU and District Environmental Sub-Committee at the district level. Secondly, the District Environmental Sub-Committee, which includes the Environmental District Officer, will carry out the initial screening in the field, through the use of the Environmental and Social Screening Form.

The screening form will facilitate the identification of potential environmental and social impacts, the determination of their significance, the assignment of the appropriate environmental category (consistent with OP 4.01), the determination of appropriate environmental and social mitigation measures, and the need to conduct an Environmental and Social Impact Assessment (ESIA). A consultant will be engaged to conduct ESIA when it is required. To ensure that the screening form is completed correctly for the various project locations and activities, training should be provided to members of the District Environmental Sub Committees as part of strengthening community level structures.

Step 2: Assigning the Appropriate Environmental Categories

The environmental and social screening form, when completed, will provide information on the assignment of the appropriate environmental category to an activity for rehabilitation of existing roads, bridges and culverts. The Environmental Sub-Committee and PIU will be responsible for assigning the appropriate environmental category to the proposed subprojects consistent with the requirements of Environmental Assessment (OP 4.01): Projects under this policy are classified into three categories. These are category A, Category B and Category C.

- a) **Category A:** A proposed project is classified as Category A if it is likely to have irreversible environmental impacts or If there is a unique activity associated with one or several major negative impacts, or If there are several activities with moderate negative impacts but which prove to be significant when cumulated. Malawi Agriculture Sector Wide Approach Project II is not categorized as A because it neither has irreversible impacts nor significant adverse cumulative impacts. The project will not finance any sub-projects or activities that are categorized as A during screening and scoping exercise because it takes long to prepare Category A safeguards instruments and may not be complete within the projects timeframe.
- b) **Category B:** A proposed project is classified as Category B if there is a unique activity associated with one or several moderated negative impacts, or if there are several activities with moderate negative impacts but which is not significant when cumulated. The scope of environmental assessment for a Category B project may vary from project to project, but it is narrower than that of Category A. Like Category A, it examines the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

Given that most sub-projects will not have significant adverse environmental and social impacts requiring a separate EIA report, the screening process will recommend the assignment of (i) category B to sub-projects requiring only the application of simple mitigation measures as developed in tables 4 and 5 of chapter 8; and (ii) some other subprojects may require a separate ESIA report and ESMP due to the severity of their potential adverse environmental and social impacts. All sub-projects which require land acquisition, impacts assets, causes a loss of livelihood, and /or restrict access to natural resources will require the preparation of an (Abbreviated) Resettlement Action Plan, based on the project RPF report.

(c) Category C: A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further environmental assessment is required for a Category C project. In cases where the results of the screening process indicate that the sub-project will not have significant environmental and social impacts, no additional environmental work will be required and sub-project implementation can proceed immediately.

In the event that an Abbreviated Resettlement Action Plans (RAPs) has to be prepared for sub-projects, these would be reviewed and approved by the Commissioner for Lands and Valuation, consistent with the Resettlement Policy Framework, prior to initiating compensation and commencement of project activities.

Each local council will ensure that members of the District Environmental Sub Committees should receive appropriate environmental and social training so that they can perform this function effectively. The Environmental District Officer is the secretariat to the District Environmental Sub Committees and

will therefore take a leading role in capacity building issues of the District Environmental Sub – Committee.

Step 3: Carrying Out Environmental and Social Work

After reviewing the information provided in the environmental and social screening form, and having determined the appropriate environmental category, the District Environmental Sub Committee will determine whether (a) the application of simple mitigation will suffice; (b) a comprehensive Environmental and Social Impact Assessment (ESIA) will need to be carried out, using the national environmental assessment guidelines; or (c) no additional environmental work will be required. ESMPs will be developed to provide mitigation measures and its implementation plan. ESIA reports are first subjected to technical review by Technical Committee on the Environment (TCE) before they are recommended to National Council on the Environment (NCE) for approval.

Use of the Environmental and Social Checklist

The checklists cover potential environmental and social impacts in construction works, as well as typical mitigation measures. The Environmental and Social Checklist will be completed by District Environmental Sub Committees in coordination with project implementation unit. Some of the activities categorized as B might benefit from the application of mitigation measures outlined in ESMP in chapter 8, table 4 and 5.

In situations where the screening process identifies the need for land acquisition and the project impacts on assets, causes a loss of livelihood, and/or restricts access to natural resources, an Abbreviated Resettlement Action Plan shall be prepared consistent with the standards and guidelines set forth in the Resettlement Policy Framework and World Bank Involuntary Resettlement Policy (under OP 4.12).

Where standard designs will be used, the District Environmental Sub Committees, in consultation with PIU and the District Commissioner will assess impacts on the chosen land site and the community; and modify the designs to include appropriate mitigation measures. For example, if the environmental screening process identifies loss of fertile agricultural fields as the main impact from the construction of a water storage reservoir, the mitigation measure would be for the District Environmental Sub Committees and members of the planning team to choose a site further away from the fertile gardens so that the livelihood systems are maintained.

Carrying Out Environmental and Social Assessment for Sub-Projects

The environmental and social impact assessment process will identify and assess the potential environmental and social impacts of the proposed construction activities, evaluate alternatives, as well as design and implement appropriate mitigation, management and monitoring measures. These measures will be captured in the Environmental and Social Management Plan (ESMP) which will be prepared as part of the environmental and social impact assessment process for each sub-project, based on the environmental and social screening.

Preparation of the environmental and social impact assessment and environmental management plans will be carried out in consultation with the Department of Environmental Affairs in the Ministry of Natural Resources, Energy and Mining. The District Environmental Sub Committees in close consultation with the Environmental Affairs Department and on behalf of the Local Council will arrange for the (i) preparation of Environmental and Social Impact Assessment terms of reference; (ii) recruitment of a service provider to carry out the ESIA; (iii) public consultations; and (iv) review and approval of the ESIA

through the national ESIA approval process. A parallel exercise of preparation of Resettlement Action Plan (RAP) will also commence, if determined as required by the procedure outlined in the RPF.

Step 4: Review and approval of the screening activities

Under the guidance of the District Environmental Sub Committees, the relevant sector committees at the district level will review (i) the results and recommendations presented in the environmental and social screening forms; and (ii) the proposed mitigation measures presented in the environmental and social checklists.

Where an environmental impact assessment has been carried out, Environmental Affairs Department will review the reports to ensure that all environmental and social impacts have been identified and that effective mitigation measures have been proposed.

Step 5: Recommendation for Approval of environmental assessment reports.

Based on the results of the above review process, and discussions with the relevant stakeholders and potentially affected persons, the District Environmental Sub Committees, in case of projects that don't require environmental assessment, will make recommendations to the District Executive Committee (DEC) for approval/disapproval of the screening results and proposed mitigation measures. As regards ESIA reports, Director of Environmental Affairs will recommend ESIA reports to the National Council for the Environment (NCE) for approval.

Step 6: Approval of the reports and environmental and social management plans.

Approval based on the results of the environmental and social screening form will be done by the District Environmental Sub Committees based on submissions by the Environmental District Officer. Approval of the results of the ESIA will be provided by the National Council on the Environment (NCE). Approval of RAP will be done by the District Commissioner.

7.4 Consultations and Disclosure

According to Guidelines for Environmental Impact Assessment in Malawi (1997) and World Bank Environmental and Social Safeguards, public consultations are an integral component of the ESIA Reports requirements, and the guidelines identify the following principal elements:

- Project Secretariat will be required to conduct public consultation during the preparation of Project Briefs, ESIA, and ARAPs.
- The Director of Environmental Affairs may, on the advice of the Technical Committee on Environment (TCE), conduct his or her own public consultation to verify the works of a developer.
- Formal EIA Reports documents are made available for public review and comments. Documents to which the public has access include Project Briefs, ESIA terms of reference, draft and final ESIA Reports, and decisions of the appropriate authorities regarding project approval. The Director of Environmental Affairs will develop practices and procedures for making these documents available to the public. It is very unusual that an ESIA will need to contain proprietary or market sensitive information (i.e. technological and financial) which a developer would prefer to remain confidential. Unless public knowledge of such information is crucial for project review, and as provided under Section 25(1) of the Environment Management Act, the Director will comply with requests that such information does not appear in an ESIA or ARAP.
- Certificates approving projects will be published by the developer and displayed for public inspection. Public consultations are critical in preparing an effective proposal for the construction project activities. The first step is to hold public consultations with the local communities and all other

interested/affected parties, during the screening process and in the course of preparing the Environmental and Social Impact Assessment Reports.

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 Environmental and Social Impact Assessment Reports.

7.4.1 Scope of consultations in environmental assessment of sub-projects.

Guidelines for Environmental Impact Assessment in Malawi (1997), provides details concerning the public consultation methods in Malawi. Such methods include press conferences, information notices, brochures/fliers, interviews, questionnaires and polls, open houses, community meetings, advisory committees, and public hearings.

The guidelines for public consultation include, among others, a requirement that major elements of the consultation program should be timed to coincide with significant planning and decision-making activities in the project cycle. In terms of Malawi's ESIA process, public consultation should be undertaken during (i) the preparation of the ESIA Reports terms of reference; (ii) the carrying out of an ESIA Reports; (iii) government review of an ESIA Reports; and (iv) the preparation of environmental and social terms and conditions of approval. Public consultations under sub-projects will be carried out by district environmental sub-committees, consultants and project committees as part of the environmental and social screening process of sub-projects, and the results will be communicated in an understandable language to potentially affected persons and beneficiaries.

7.5 Recommendations on Environmental Screening of Sub-Projects.

Proposed sub-projects will consist of various construction/rehabilitation of feeder roads and other activities with potential impacts. Potential environmental and social impacts are anticipated to be localized within the project sites. In this regard, screening for these components will be adequate because the mitigation measures outlined in the specific EMPs will be used and there won't be need of detailed Environmental and Social Impact Assessment Reports.

Most of sub-projects (construction of feeder roads) will require simple environmental and social management plans. The impacts will largely be localized and of moderate to low significance. The impacts can be mitigated effectively if the contractor is empowered to address the impacts in course of project activities.

CHAPTER EIGHT: POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MANAGEMENT PLANS

The proposed Malawi Agriculture Sectorwide Approach Project II consists of various components/sub-projects. Sub-projects such as development of construction/rehabilitation of rural feeder roads are expected to generate some significant environmental and social impacts in project locations.

The purpose of this chapter is providing guidance for the screening and highlight typical potential environmental and social impacts from main rehabilitation and re-construction works of Malawi Agriculture Sectorwide Approach Project II.

Step One: Assessment of baseline information in the project impact area

The exercise involves analysis of data and familiarization with information on the physical environment of the project area, human settlements and demographic pattern of the project area, economic and social conditions of the project area. The information has been used as reference point for evaluation potential changes and externalities which would result from project implementation.

Step Two: Review the main machinery and inputs in project activities

The necessity of this step was to examine the potential changes and impacts which could be created about in use of the proposed project machinery and inputs in activities within the project area. For example, the use of tractors on construction sites generate some environmental impacts. Use of pesticides in farmers' fields have impacts on water.

Step Three: Review the nature and quantities of the main outputs

The aim of this step was to examine the potential changes and impacts which could be brought about by the delivery and use of such projects outputs which are the feeder roads and other benefits of the project.

Step Four: Identifications of the potential impacts from works

Upon examination of the scope and project implementation strategy, checklist can be used to forecast the main impacts. One common checklist is the Leopold Type Matrix which guided on identification of primary impacts on components of environment from categories of infrastructure related projects. The identification of secondary level impacts and the social impacts relied on the professional experience of implementing units.

8.1 Summary of Potential Negative Environmental and Social Impacts

This step involved the systematic outline of the identified impacts, their sources/causes and the potential risks and effects of the impacts in the project impact area. This chapter presents sampled screening of impacts for two components of Malawi Agriculture Sector wide Approach Project II. These are the Sustainable Agricultural Productivity and Diversification and Improvement of Rural Roads. Table 2 overleaf presents an outline of the predicted main negative impacts and the potential sources of the impacts from implementation of the project Component 1: Sustainable Agricultural Productivity and Diversification, sub-components 1.1 to 1.5 (Farm Input Subsidy Programme; Promotion of diversified crop production systems; Integrated Soil Fertility Management; Pests/diseases and plant protection and Poultry production). Table 3 outlines of the predicted main negative impacts, the potential sources of the impacts from component 2 (Improvement of Rural Roads).

Table 2: Outline of Potential Environmental and Social Impacts from Component 1 – Sustainable Agricultural Productivity and Diversification (Farm Input Subsidy Programme; Promotion of Diversified Crop Production Systems; Integrated Soil Fertility Management; Pests/Diseases and Plant Protection and Poultry production)

| Component of the environment to be affected. | Potential environmental and social impacts | Source of impacts/cause of the impacts | Potential significance |
|--|---|--|-------------------------------|
| Vegetation Resources | Loss of vegetation | Land clearing to pave way for increased agricultural production and feeder roads | Moderate |
| Land and Soil Resources | Increased soil erosion | Top soil stripping during land preparation | Moderate |
| | Increase in surface runoff and soil erosion. | Clearance of vegetation | Moderate |
| | Risks of degradation of soil | Excess use of agro-chemical, nutrient depletion | Moderate |
| Water Resources | Increased agro-chemical availability, application/ accumulation as more and more inputs are made available to farmers | Spillage in storage and improper use of agro chemicals and pesticides Leaching of chemicals | Moderate |
| | Pollution of groundwater and surface water resources | | |
| | Pollution from agro- chemicals | | |
| | Increase in siltation and deterioration of water quality in streams within the area | Increase in soil erosion and debris from the cleared land | Marginal |
| | Eutrophication of water bodies | Increase in pollution from residues of agro -chemicals (fertilizers) | Marginal |
| Ambient Air | Air pollution / (Nuisance from emissions of agro-chemicals) | Ordour from agro-chemicals when sprayed for pest/disease and plant protection | Moderate |
| Health and Safety risks to workers and local people | Introduction and spread of communicable diseases and sexually transmitted diseases including HIV/ and Aids | Interactions of project beneficiaries | Marginal |
| | Risks of poisoning from agro-chemicals by agro-dealers and farmers Threats to human health and the environment | Accidental spillages and exposure to agro chemicals in storage and during use; Poor pesticides and herbicides storage, handling and application by agro-dealers and smallholder farmers | Marginal |

Table 3: Outline of Environmental and Social Impacts from Component 2 - Improvement of Rural Roads

| Component of the environment to be affected | Potential impacts | Source of impacts/cause of the impacts | Potential severity. Ranking Key: severe moderate marginal |
|--|--|---|--|
| Vegetation Resources | Loss of vegetation (trees) and greenery Loss of biodiversity | Clearing for feeder roads Disruption of natural habitats | Moderate |
| Land and Soil resources | Creation of borrow pits | Gravel excavation for LVS, top soil stripping and road gravel | Moderate |
| | Incision of bridges and culverts | Construction of culverts and bridges | Moderate |
| | Increase in surface runoff and soil erosion | Clearance of vegetation at and compaction of roads | Moderate |
| | Pollution of land by solid wastes | Disposal of solids from camps of contractors | Marginal |
| | Pollution of soil from contamination of petroleum products. | Leakages and spillage from vehicles and construction equipment, storage facilities and maintenance workshop. | Moderate |
| Water Resources | Increase in sediments delivery into surface water bodies such as rivers and dams. | Sediments from rural roads rehabilitated though public works. The soils are left loose. | Moderate |
| Ambient Air and Climate change | Dust emissions from construction works during construction phase | Project civil works and heavy equipment in fields and on dusty roads during dry season | High |
| | Noise and vibrations from construction equipment and trucks | Project civil works within construction phase. | Marginal |
| | Emissions of greenhouse gases (carbon dioxide, nitrogen and Sulphur) into air. | Gases are released from exhausts of vehicles and construction plants | Moderate |
| Local Communities | Influx of migrant workers leading to competition of land and natural resources in the area | Migration of people and their families seeking employment. | Moderate |
| | Risks of introduction and spread of communicable diseases and sexually transmitted diseases including HIV/AIDS | Interactions between migrant workers and local people; extra marital affairs by some migrant workers with local women in the area | Moderate |
| | Conflicts between migrant workers and local people | This may rise due to high social and economic differentiation between workers and local people; This may arise due competition for jobs and due to interferences in local marriages by unmarried migrant workers | Marginal |
| | Risks of child labor in some activities at road rehabilitation/upgrading activities | Recruitment of under aged persons and within senior staff quarters may enhance local children dropping from school in option of work at | Marginal |

| | | | |
|--------------------------|--|--|-----------------|
| | Risk of tampering with graveyard or archeological/historical site/object | Road construction activities that may pass through a graveyard of archeological/ancestral/historical site/object. | Moderate |
| Rural Livelihoods | Reduced availability of labor for local agricultural activities | Most people in the economic active age would be engaged in public works, thereby leading to shortage of labor in local gardens. | <i>Moderate</i> |
| | Loss of properties due to road rehabilitation works | Land and developments along the roads | Moderate |
| Health and Safety | Risks of introduction and spread of communicable diseases and sexually transmitted diseases including HIV/AIDS | Interactions of migrant workers and local people; increase in sexual interactions between employed migrant workers and local women | Moderate |
| | Nuisance from emissions from burning of asphalt | Heating of bitumen by construction workers | Marginal |
| | Risks of occupational diseases for workers | Dust particles and contaminated air within premises can cause respiratory diseases among workers. | Marginal |
| | Risk of vehicle and machinery accidents | Increased presence of construction equipment and increased use of machinery | Marginal |

8.3 Summary of Cumulative Environmental and Social Impacts

8.3.1 Assessment of Potential Cumulative Negative Impacts

The Malawi Agriculture Sectorwide Approach Project II would trigger short and long term environmental and social impacts in the environment. Impacts within short term will include those which can be felt immediately upon implementation of activities and occur within 3 years. Most of these impacts have short term and localized effects. On the other hand, some impacts from agricultural activities have long term negative effects and to the wider communities and environmental resources in general. Some of these impacts will build up after accumulation of effects over a set period of time. The following paragraph summarizes some potential cumulative environmental and social impacts from selected components of Malawi Agriculture Sectorwide Approach Project II.

8.3.1.1 Cumulative impacts on under Sustainable Agricultural Productivity and Diversification

Main cumulative effects will be from activities on the farmers' fields. These will include the following:

- a) *Salinization of soils due to application of fertilizers.* Salinization of soils normally occurs after over application of chemical fertilizers. Fertilizers are used on farmers' fields to enhance yields. Soils become less productive as it has less nutrients.
- b) *Pollution of surface and underground water resources.* Underground water resources on the farmers' fields would be polluted by agro-chemicals and fertilizers. Pollution of underground water leads to health risks to communities who use wells and boreholes for drinking and cooking water.
- c) *Loss of productive human resources/labor force due to HIV/Aids related infections.* Some localities experience loss of productive labor force in rural areas due to effects of death from HIV/Aids related complications. Loss of productive labor force may affect agricultural production around the project area.
- d) *Depletion of micro-organism within the soil of farmers' fields.* Micro-organism play vital role in humus production and aeration of soils. Humus help to maintain water in soil. However, some micro-organisms will be depleted due to compaction of soils and heavy application of fertilizers and agro-chemicals on commercial farms.
- e) *Loss of vegetation due to expansion of farming land impacting on vegetation, wildlife and land and soil resources.*

8.3.1.2 Cumulative impacts on construction of rural roads

Some main cumulative effects from construction of feeder roads will be compaction of land. Land compaction will occur in the long run due to use of construction machinery and trucks during construction of

feeder roads. Compaction of land will lead to increase in surface discharge leading to local flooding in stream.

In addition, loss of land due to construction of mitre drains along the constructed and rehabilitated roads is another area of impact under the component

8.4 Environmental and Social Monitoring Plans

The environmental and social monitoring plans are presented in tables 6 and 7. The monitoring plans are in tabular format in order to clearly show linkages between recommended mitigation measures, monitoring indicators, frequency of monitoring and stakeholders responsible for monitoring. There will be two levels of monitoring in order to enhance effective follow up on implementation of proposed mitigation measures. One level of monitoring will be by Safeguards Expert resident at Project Implementation Unit. The second level of monitoring will be carried out by Environmental Inspectors/Specialist from Environmental Affairs Department in ministry of Natural Resources, Energy and Mining

The Safeguards Expert from Project Implementation Unit will work on day to day supervision of implementation of environmental and social safeguards. The Environmental and Safety officer will also be responsible for training of construction workers on adherence to occupational health and safety measures within the contractors' camps and construction site.

Environmental Affairs Department will designate Environmental Inspector/Specialist during construction phase of the project. The Environmental Inspector/Specialist will carry the following tasks on the project:

- Supervise adherence to environmental and social mitigation measures for contractors.
- Orient and supervise construction workers on use of relevant personal protective equipment/clothing during construction period.
- Sensitize workers and communities around on community health aspects including preventative measures on communicable diseases
- Provide technical guidance on implementation of environmental and social mitigation measures.
- Sensitize migrant workers on dangers of sexually transmitted diseases including HIV/Aids. Train workers on HIV/Aids Work Place Policy, mitigation measures for contraction/spread of HIV/Aids among workers, family members and members of surrounding communities.
- Prepare periodic monitoring reports on environmental and social safeguards. The reports will be shared with all stakeholders including World Bank Office,

Budget estimates for all activities under Environmental and Social Monitoring Plans have been incorporated under column four of the monitoring plan. Ministry of Agriculture, Irrigation and Water Development will provide funds for monitoring environmental and social mitigation measures.

8.5 Samples of Environmental and Social Management Plans and Monitoring plans.

Some samples of environmental and social management plans for sub-projects have been prepared for identified impacts. These samples of environmental and social management plans cover for generic environmental and social impacts for farming activities, livestock interventions and public infrastructure – the feeder roads.

The descriptions of environmental and social management plan are as follows:

- a) Table 4 presents an Environmental and Social Management Plan for development construction of rural feeder roads.

These ESMPs have been prepared for reference purposes in preparation of detailed ESMPs for some of the sub-projects. Implementing agencies will prepare site specific environmental and social management plans once the specific sub-projects have been identified and specific site of implementation has been identified. These activities would be carried out in a later stage in project preparation and design stages.

Table 4: Environmental and Social Management Plan and Monitoring Plan for Component 1 – Sustainable Agricultural Productivity and Diversification (Farm Input Subsidy Programme; Promotion of Diversified Crop Production Systems; Integrated Soil Fertility Management; Pests/Diseases and Plant Protection and Poultry production)

| Identified Negative Impacts for mitigation | Recommended mitigation measures | Responsible Authority for Implementation of the measures | Budget Estimates (in MK) | Performance targets on implementation | Monitoring authorities and budget estimates | Means of verifications | Frequency of monitoring |
|---|---|--|--------------------------|--|--|------------------------|-------------------------|
| Impacts on vegetation resources. | | | | | | | |
| Loss of vegetation and greenery beauty in targeted project sites | -Establishment tree nurseries including tree seedlings for natural trees - Promote agroforestry - Re-plant and re-vegetate | MoAIWD Departments; DESC | To be determined | -Vegetative buffer zones -Ha out-planted with trees and that under natural regeneration -Number of farmers practising agroforestry | MoAIWD Departments; DESC; Project Safeguards Specialist MK2,000,000 | Progress Reports | Every six months |
| Impacts on wildlife Resources | | | | | | | |
| -Loss of habitat for wild animals -Loss of biodiversity mice, snakes | -Maintain some trees around as tree belts -Afforestation within local villages -Develop Strategy to protect/restore biodiversity. | MoAIWD Departments; DESC | To be determined | -Vegetative buffer zones -Number of trees planted -Biodiversity retained | MoAIWD Departments; DESC; Project Safeguards Specialist MK900,000 | • Progress Reports | Every six months |

| Impacts on land and soils. | | | | | | | |
|--|--|-----------------------------|----------------|--|--|--|------------------|
| -Increase in surface runoff and soil erosion due to increase in exposure of soil | -Implement soil conservation measures within all the fields (check dams, box ridges) -Promote CA for increased infiltration | MoAIWD Departments; DESC | K3,000,000. | <ul style="list-style-type: none"> Ha under CA Ha under Soil and Water conservation measures – box ridges, check dams. | MoAIWD Departments; DESC; Project Safeguards Specialist MK800,000 | <ul style="list-style-type: none"> Progress Reports | Every six months |
| <ul style="list-style-type: none"> Risks of salinization | <ul style="list-style-type: none"> Apply correct amount of fertilizers Add lime to soil where there are problems of salinization | MoAIWD Departments; DESC | K1000, 000. | <ul style="list-style-type: none"> Regulation of correct fertilizers to soils | MoAIWD Departments; DESC; Project Safeguards Specialist MK500,000 | Progress reports – soil analysis reports | Annually |
| <ul style="list-style-type: none"> Disturbance to the growth of micro - organisms | <ul style="list-style-type: none"> Use correct amount of fertilizers in fields Use of a combination of organic fertilizers; minimum tillage and recycling of crop residues | MoAIWD Departments; DESC | Not applicable | <ul style="list-style-type: none"> Use of organic fertilizers, minimum tillage and residue recycling methods | MoAIWD Departments; DESC; MK350,000 Project Safeguards Specialist | <ul style="list-style-type: none"> Progress reports | Every six months |
| Impacts on water resources. | | | | | | | |
| <ul style="list-style-type: none"> Increase in suspended solids and sediments | <ul style="list-style-type: none"> Water harvesting measures (box ridges, | MoAIWD Departments; | K3,000,000 | Water harvesting/land conservation measures in | MoAIWD Departments; DESC | Progress reports | Every six months |

| | | | | | | | |
|--|--|--------------------------|----------------|---|---|------------------|------------------|
| delivery into surface water resources. | check dams) and improvement of soil infiltration | DESC | | place | | | |
| Exposure and pollution from agrochemicals | Refer to PMP recommendations | MoAIWD Departments; DESC | | Protective measures implemented as recommended in PMP | MoAIWD Departments; DESC; Project Safeguards Specialist | Progress reports | Every six months |
| Increase in siltation and deterioration of water quality in streams nearby | Maintenance of vegetative buffer zone along rivers to minimizes soil erosion into rivers | MoAIWD Departments; DESC | Not applicable | Vegetative buffer zones along rivers | MoAIWD Departments; DESC; Project Safeguards Specialist MK500,000 | Progress report | Every six months |
| Impacts on air. | | | | | | | |
| Air pollution from agrochemicals | Refer to PMP recommendations | MoAIWD Departments; DESC | | Protective measures implemented as recommended in PMP | MoAIWD Departments; DESC; Project Safeguards Specialist | Progress reports | Every six months |
| Health and Safety of workers/people | | | | | | | |

| | | | | | | | |
|--|---|--------------------------|-----------|---|--|--|------------------|
| Spread of sexually transmitted infections including HIV and Aids | <ul style="list-style-type: none"> Civic education on dangers of the HIV and Aids among the people | MoAIWD Departments; DESC | MK500,000 | <ul style="list-style-type: none"> Number of civic education meetings | MoAIWD Departments; DESC; MoHPS; Project Safeguards Specialist MK200,000 | Progress Reports | Every six months |
| Exposure and poisoning from agrochemicals | -refer to PMP recommendations | MoAIWD Departments; DESC | MK500,000 | Protective wear in use for handling agrochemicals Training done for staff Restriction to storage facilities | MoAIWD Departments; DESC Project Safeguards Specialist | Progress Reports Procurement/stores records | Every six months |

Table 5: Environmental and Social Management Plan for Component 2: Improvement of Rural Roads

| Identified Negative Impacts for mitigation | Recommended mitigation measures | Responsible Authority for Implementation of the measures | Budget Estimates (in MK) | Recommended Performance targets on implementation | Monitoring authorities and budget estimates | Means of verifications | Reporting Frequency |
|--|--|--|--------------------------|--|--|--|---------------------|
| 1.0 Impacts on vegetation resources. | | | | | | | |
| 1.1 Loss of vegetation and greenery beauty through clearance of trees on the site 1.2 Loss of habitat | Revegetate/replanting of trees A Separate strategy/plan should be developed on protecting/restoring a species that is endangered. | Contractor | To be determined | Number of planted trees | MoAIWD; DESC; Project Safeguards Specialist MK200,000 | <ul style="list-style-type: none"> Progress reports | |
| 2.0 Impacts on land and soils. | | | | | | | |
| 2.1 Increase in surface runoff and soil erosion due to increase in exposure of soil | a) Construction of culverts b) Compaction of the road and drains | Contractor | | Length of storm water drains Number of culverts | Contractor; RA; DESC; Project Safeguards Specialist MK500,000 | <ul style="list-style-type: none"> Progress Reports | Every six months |
| 2.2 Creation of borrow pits and risks of soil | Back fill and regenerate natural vegetation in all borrow pits | Project Contractors | | Number of borrow pits backfilled | Contractors; RA; DESC; | Progress Reports | Every six months |

| | | | | | | | |
|--|---|---------------------|------------------------------------|---|---|--|------------------|
| erosion. | after construction works | | | | Project Safeguards Specialist MK2,000,000 | | |
| 2.3 Pollution of soil from contamination of petroleum products | <p>a) Proper storage facilities for oils, diesel and minimize spillage. Minimize spillage from machinery on site through proper maintenance</p> <p>b) Fence to storage facilities for fuel to reduce unauthorized personnel</p> | Project Contractors | MK200,000 | <ul style="list-style-type: none"> Fuel tanks well-constructed no leakages. Fuel collectors installed in garage/workshops | Contractors; RA; DESC; Project Safeguards Specialist MK200,000 | <ul style="list-style-type: none"> Progress & Lab Reports | Every six months |
| 3.0 Impacts on water resources | | | | | | | |
| 3.1 Increase in suspended solids and sediments into surface water resources. | a) Construct drainage structures | Project Contractors | Included under Construction budget | <ul style="list-style-type: none"> Length of storm water drains Number of culverts | Contractors; RA; DES; Project Safeguards Specialist; MK200,000 | <ul style="list-style-type: none"> Progress & Lab Reports | Every six months |

| | | | | | | | |
|---|--|--|--|--|--|------------------|------------------|
| 3.2 Pollution from spillage of petroleum products | <p>a) Security of storage facilities for oils, diesel at camp and minimize spillage</p> <p>b) Use of well-maintained vehicles and construction equipment</p> | Project Contractors | | <p>Secured fuel tanks with no leaks</p> <p>Used oil kept in drums for recycle elsewhere</p> <p>Used of well-maintained vehicles/equipment</p> | Contractors; RA; DESC; Project Safeguards Specialist MK350,000 | Progress Reports | Every six months |
| 4.0 Impacts on air | | | | | | | |
| 4.1 Dust emissions in the area | <p>a) Suppress of dusts from dry civil works by application of water.</p> <p>b) Provide protective wear to workers to protect workers from contamination</p> | Project Contractors Project Contractors | | <p>application of water to dry civil works</p> <p>Use of protective wear by workers such as dust coats</p> | Contractors; RA; DESC; Project Safeguards Specialist MK350,000 | Progress Reports | continuous |
| 4.2 Noise from construction machinery and transportation trucks in the area | Provide protective wear to workers during civil works to protect ear drums | Project Contractors Project Contractors | | Use of protective clothes in ear to protect eardrums | Contractors; RA; DESC; Project Safeguards Specialist | Progress Reports | continuous |

| | | | | | | | |
|--|---|---|--|---|--|--------------------------------------|--------------------|
| | | | | | MK450,000 | | |
| 5.0 Social impacts on local communities. | | | | | | | |
| 5.1 Influx of migrant workers leading to competition of land and natural resources in the area | a) Recruitment of local people as general labor force as priority. | Project Contractors | | Number of local people employed. | Contractors; RA; DESC; Project Safeguards Specialist MK300,000 | Progress Reports; Employment records | Every six months |
| 5.2 Risks of introduction and spread of communicable diseases and sexually transmitted diseases including HIV/Aids | a) Put in place HIV/Aids Work Policy and operationalize it for benefit of workers b) Establishment of roads HIV/Aids Workers' committee c) Weekly sensitization meetings among roads workers, on dangers of HIV/Aids. d) Distribution of condoms and IEC materials for free of | Project Contractors Local village headmen District HIV/Aids Coordinator | | HIV/Aids Workers Committee and peer groups at roads Number of sensitization meetings Number workers and condoms distribution HIV/Aids Work Place Policy for road | Contractors; Local village headmen; DESC; Project Safeguards Specialist MK350,000 | Progress Reports | . every six months |

| | | | | | | | |
|--|---|---|--|--|--|--|-------------------|
| | workers, and, local people around e) Paste stickers with HIV/Aids messages on project vehicles and construction equipment | | | | | | |
| 5.3 Conflicts between migrant workers and local people | a) Recruitment of local people as general labor force as priority b) Sensitization of migrant workers to respect local cultures and live with local people in harmony. | Project Contractors Local village headmen | | ☒ Number of local people employed. ☒ Number of sensitization meetings | Contractors; RA; DESC; District Labor Office; Local Leadership; Project Safeguards Specialist MK200,000 | Progress Reports Employment records At road works. Sign board in place | Six months report |
| 5.4 Risks of child labor | a) Recruitment of workers through District Labor Office. No recruitment of school going children or persons below 18 years for any work at roads. b) Put a sign board at contractors' camps — No employment for person under | Project Contractors District Labor Officer | | Minimum age of workers at road works. Sign board in place | Contractor; RA; DESC; Project Safeguards Specialist MK400,000 | | |

| | | | | | | | |
|---|---|--------------------------------|--|---|-------------------------------------|------------------|-------------------|
| | age of 18 years | | | | | | |
| 5.5 Loss of structures, land uptake for road diversions and widening | c) Compensation for land uptake for gravel pits. d) Compensation for small structures, trees (miscellaneous) | Project Contractor | | <input type="checkbox"/> Number structures, trees compensated <input type="checkbox"/> Number of borrow pits compensated | MoAIWD; MK1,000,000 | Progress report | Six months report |
| 5.6 Road construction passing through graveyard or archeological/historical site/object | Procedures of chance find will take precedence. Local communities will be consulted | Contractor; local communities; | | Report on meetings with local communities | MoAIWD; MK1,000,000 | Progress report | Six months report |
| 6.0 Health and Safety | | | | | | | |
| 6.1 Nuisance from smoke and smut from burning of bitumen | a) Use of cold mix asphalt or concrete slabs for road surface which is noted heated b) Use of slurry bound | Project Contractors | | <input type="checkbox"/> Use of alternative surfacing materials | Contractors; DESC; DHO MK350,000 | Progress Reports | Six months report |

| | | | | | | | |
|--|---|---------------------|--|---|---|------------------|-------------------|
| | macadam surfacing which is not heated c) Provision of protective wear to workers. | | | | | | |
| 6.2 Physical injuries from accidents– fall from trucks and machinery etc | a) Provide protective clothing to workers | Project Contractors | | <ul style="list-style-type: none"> ☐ Types of protective wear with workers | Contractors; RA; DESC; Project Safeguards Specialist MK200,000 | Progress Reports | Six months report |
| 6.3 Exposure and poisoning from cement | <p>a) Provision of adequate protective clothing to workers in use of agro-chemicals such as mouth masks, goggles and gloves.</p> <p>b) Adequate training of workers calibration of equipment, handling storage materials</p> <p>c) Restriction of access to storage of cement to trained staff only</p> | Project Contractors | | <ul style="list-style-type: none"> ☐ Protective wear in use for workers ☐ handling petroleum products. Training done for staff ☐ Restriction to storage facilities | Contractors; RA; DESC; DHO; Project Safeguards Specialist MK200,000 | Progress Reports | Six months report |

MITIGATION PLAN FOR LABOUR INFLUX RELATED RISKS

| Description of Potential Risks | Proposed Mitigation Measures for Risks | Authorities Responsible for Implementation | Proposed Budget | Performance Indicators |
|--|---|--|-----------------|--|
| Deforestation around the project site | <ul style="list-style-type: none"> Planting of trees around the sites cleared | Contractor | ~MK500,000 | <ul style="list-style-type: none"> No. of trees planted |
| Overcrowding and Competition over natural resources | <ul style="list-style-type: none"> Hire workers from within | Contractor | | |
| Increase in gender based violence | Periodic sensitization of workers against gender based violence in homes | Contractor | Not Applicable | No. of reports of violence |
| Risk of child labor in the areas and increase in school drop out | <ul style="list-style-type: none"> Recruit workers from Labor Office Put sign board about NO CHILD LABOUR at the site Recruit workers above 18 years old | Contractor | Not Applicable | Employment Records |
| Increase in theft of properties in local communities | <ul style="list-style-type: none"> Periodic sensitization meetings for migrant workers to desist from theft Establishment of community policing programme | Contractor | Not Applicable | Reports |
| Increase in population by migrant workers | Relocate the workers after the project | Contractor | MK2,500,000 | Reports |
| Increase in pressure on accommodation and rent | Recruit workers locally to commute from their homes | Contractor | Not Applicable | Employment Records |
| Poor sanitation at workers' camp | Provide adequate toilets and bathrooms at workers' camps and homes | Contractor | MK1,000,000 | No. of toilets and bathrooms |
| Indiscriminate disposal of solid waste | Designate sites for waste disposal | Contractor | Not Applicable | No. of sites for waste disposal |

CHAPTER NINE: CAPACITY DEVELOPMENT, TRAINING AND RESOURCES

The Project will be implemented by 5 Ministries as mentioned in Chapter 2 section 2.3.1 but coordinated by PIU that will be housed in Ministry of Agriculture, Irrigation and Water Development. The institutions will be assessed in terms of capacity of the institutions to carry out ESMF recommendations. However, based on experience gained from ASWAp-SP I, DESC, PIU, Department of Land Resources and Roads Authority requires to be trained. Important to note is that the PIU will recruit Safeguards Specialist, Roads Authority has Environmental and Social Safeguards while Department of Land Resources and Crops has designated staff that manage safeguards issues.

The District Environmental Sub Committees will have an orientation on environmental and social safeguards. This orientation will be a sub-set of the orientation of District Executive Committee on proposed construction works and rehabilitation and re-construction works for last mile infrastructure in districts will run for 1 day. The participants to the course will include the five local council sector heads from Forestry, Environment, Agriculture, Health and Water. District meetings will be organized and facilitated by Department of Environmental Affairs, and Department of Lands and Valuation. The cost of the orientation in all districts will be estimated based on the assessment carried out and will also be based on costs of previous training programmes of similar World Bank funded project in Malawi. The trainings will cover but not limited to:

| No | Description of training | Target Group |
|----|---|--|
| 1 | ASWAp-SP and linkage to Safeguards policies | DESC, 5 Ministries, EAD, PIU |
| 2 | Sensitization of stakeholders on environmental and social management framework and PMP for the project. | District Councils and Extension workers |
| 3 | Training on guidelines for Screening of sub-projects | DESC, PIU, Ministry of Agriculture departments |
| 4 | Training on preparation of ESMP | DESC, PIU, Ministry of Agriculture departments, Roads Authority |
| 5 | Training on Management, monitoring/supervision of ESMPs and reporting | Procurement and finance, PIU, EAD, DESC, DADO, extension workers |
| 6 | Training on environment and social impacts | Contractors |
| 7 | Gender, HIV mainstreaming | DESC, PIU, Ministry of Agriculture departments, Roads Authority |

Specific information, education and communication materials will be prepared to guide on matters of environmental and social screening to councils, nongovernmental organizations. Materials will include fact sheets and briefing notes.

9.1 Technical Support in Preparation of Environmental and Social Management Plans for Sub-Projects

Consultants have to prepare detailed environmental and social management plans for the sub-projects such as construction/rehabilitation of feeder roads. The budget for one such assignment will be determined based on requirements. The budget for ESMP will be included in the construction contracts. Malawi Government has agreed to provide financial resources to implement activities listed above. Ministry of Agriculture, Irrigation and Water Development will provide the resources to Project Implementation Unit in

each financial year in order to carry out environmental and social impact assessment reports and environmental and social management plans for sub-projects.

9.2 Work Plan and Budget

PIU and local government officials at district level will be responsible in the implementation of capacity development activities on Environmental and Social Management Framework. Budget estimated costs for the various activities under this program will be built in the overall project budget. The core activities will be trainings as stipulated in the above section

Malawi Government will provide financial resources to implement activities listed above. Ministry of Agriculture, Irrigation and Water Development will provide the resources to Project Implementation Unit each financial year in order to implement the list activities above.

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- World Bank (2013) **Operational Policies, OP 4.01 Environmental Assessment**
- World Bank (2012) **Operational Policies, OP 4.12 Involuntary Resettlement Policies**
- World Bank (2012) **Operational Policies, OP 4.09 Pest Management**
- World Bank (1999) **Operational Policies, OP 4.11 Cultural Properties – Archeological Chance Find Procedures**

Annex 1: Suggested Outline of a Template ESMP of Malawi Agriculture Sector Wide Approach Project II

Executive Summary

Introduction

Description of the Proposed Project

Policy and Legal Framework on environmental assessment in Malawi and World Bank Safeguards

Description of the Environmental Setting

Significant Environmental Impacts

Analysis of Alternatives

Screening criteria and forms

Environmental and Social Management Plan

Environmental and Social Monitoring Plan

Capacity Building and Training for Environmental Management

References

Annexes

- *ToRs for the development of sub-projects ESMPs*
- *Environmental and Social Screening Form*
- *Environmental and Social Rules for contractors*
- *Checklist of environmental and social impacts from construction works*
- *Minutes of consultation meetings and list of participants*

Annex 2: Terms of Reference for Archeological Chance Find Procedures

Archaeological Chance Find Procedures

If the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:

- i. Immediately stop the construction activities in the area of the chance find.
- ii. Delineate the site or area of the chance find.
- iii. Secure the site to prevent any damage or loss of removable objects.
- iv. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the Ministry in charge of managing cultural heritage and related resources in the country (Department of antiquities) take over.
- v. Notify the supervising Project environmental and social safeguards Officer and Project Engineer who in turn will notify the responsible local authorities and the responsible ministry immediately (within a period of not more than 24 hours).
- vi. The responsible local authorities and the responsible ministry would then be in charge of protecting and preserving the site while subsequent appropriate procedures are determined.
- vii. This would require a preliminary evaluation of the findings to be performed by archaeologists assigned by the government. The significance and importance of the findings should be assessed according to the various criteria relevant to physical and cultural heritage, namely the aesthetic, historic, scientific or research, social and economic value.
- viii. Decisions on how to handle the finding shall be taken by the responsible local authorities and the responsible ministry. This could include changes in the layout (such as when finding irremovable remains of cultural or archeological importance) and alignment, conservation, preservation, restoration and salvage.
- ix. Implementation of the decision concerning the management of the finding shall be communicated in writing by the relevant local authorities and the responsible ministry.
- x. Construction work may resume only after permission is given from the responsible local authorities and/or the responsible ministry concerning safeguard of the heritage.

ANNEX 3: Record of Discussions During Public Consultations for ESMF

ESMF/RPF/PMP STAKEHOLDERS' CONSULTATIONS (24TH OCTOBER, 2017) IN LILONGWE WEST AND NTCHISI DISTRICTS UNDER LILONGWE ADD AND KASUNGU ADD RESPECTIVELY

AGENDA FOR THE MEETING

The meeting was called for with the following agenda:

- Brief for the ASWAp SP II Project with funding from World Bank
- Introduction to the Instruments for Safeguards Management

Introduction

The meeting was called to order with opening remarks from the Team Leaders from the ASWAp Secretariat who also chaired the meeting. The agenda of the meeting was introduced to the members by the Chairperson as presented and was adopted starting with individual introductions. Both staff from all stakeholders and farmers were represented during the meeting.

2.0 Presentations

2.1 The Agriculture Sector Wide Support Project II with funding from World Bank

The presentation of the ASWAp SP II Project was made providing the project background, the rationale for the second ASWAp SP – that it is building upon the first project, the components and their subcomponents and the expected outcomes when the project is implemented. Emphasis was made on the fact that the bigger component of the project is on the rural roads improvement and that all other activities will follow where these roads are going to be and that all the activities under agriculture will follow. The project is to be financed through the MDTF arrangements which are overseen by the Trust Fund Manager the World Bank. The project brief presented is attached as an Appendix 1.

During the discussions following the general introduction – farmers expressed interest especially for the marketing issues noting that the improvement of rural roads will also ease access to markets and this will benefit them. After this discussion then each of the safeguard tools were presented and the following section outlines the presentation for the Environmental and Social Management Framework, feedback from the farmers and the issues raised.

2.2 Environmental and Social Management Framework (ESMF)

The presentation highlighted the rationale for developing the framework stating that it is a statutory requirement in line with the legal framework of the country but also the requirement of the Donor because of the safeguard policies which have been triggered. The policies triggered include: OP4.01 (Environmental Assessment); OP4.04 (Natural Habitats); OP 4.09 (Pesticide Management); OP4.11 (Cultural Properties) and OP4.12 (Involuntary Resettlement). The presentation then highlighted the following that:

- the ESMF is a tool which is being developed against the background that in the implementation of a project of this nature there are bound to be both positive and negative impacts; it is the positive impacts which in most cases outweigh the negative impacts for the

project design to continue but there is need to have a policy document which will assist to guide processes when the impacts (especially negative ones) are experienced;

- the Framework will help us to develop instruments which can be used to attend to the issues experienced during implementation; thus, the ESMF takes care of the fact that although the project is to be implemented, the exact locations for each of the sub projects is not yet known and as such, the framework provides for procedures on how the impacts identified can be enhanced (if positive) or mitigated if negative; Hence the ESMF will provide for screening of the subprojects to identify impacts;
- the instruments which have been developed alongside the ESMF are the Resettlement Policy Framework (RPF) to address issues of land acquisition especially under the roads component, the Pesticide Management Plan (PMP) to address issues of pesticides which will be used during implementation of the project to deal with pests and diseases during production and accompanying biodiversity plans as well as the reference document when cultural properties are involved;
- the ESMF provides for guidelines for the development of an EMP which is the tool which is developed outlining the impacts and the measures to be undertaken and the responsible institutions to undertake the work, including a budget to implement the mitigation and enhance measures identified and presented in the EMP;

3.0 Comments and Questions

Following the presentation, a number of issues were raised especially pertaining to the anticipated positive as well as the negative impacts. These are presented from the perspectives of the farmers and staff:

3.1 Farmers:

3.1.1 Positive Impacts:

- There will be continued extension support which is required so that all farmers benefit
- Improved market access which currently is limited
- Increased adoption of technologies – already the farmers are being taught by extension staff on the different hence these will continue
- Increased benefits to farmers – through the public works component

3.1.2 Negative Impacts:

- Deforestation – trees will be cut down; to be mitigated through replanting of trees/afforestation
- Soil erosion will also be experienced because productive agricultural lands may be used – they will plant vetiver grass to control erosion and implement other soil conservation technologies like contour ridging;
- Cultivation is likely to also take place in steep slopes or mountains – farmers indicated that they will mitigate using terracing, planting of vetiver grass, construction of check dams and planting of trees;
- Siltation of watercourses and dams – to be mitigated with planting of trees, construction of check dams, contour ridging as well as implementation of good agricultural practices;
- Increased exposure to agro-chemical pollutants – to be mitigated with use of protective clothing and training on safe handling of chemicals;
- Soil contamination – judicious use of pesticides and herbicides

- Under the roads component –
 - Under roads – the farmers noted that if it means rehabilitation, the already existing roads will be targeted and therefore not much harm is for seen, however if new roads are be constructed – farmers’ fields may be affected as the roads will pass through the fields thus reducing the size of the farmland and hence affecting their production – livelihoods; In response, it was explained that those concerning land acquisition for detours/diversions – these may affect fields; woodlots, dwelling units, the community should understand that there will be procedures to determine compensation depending on how a member is affected – this will be determined through a survey which will be undertaken when the roads have been identified and hence determine who is much more affected and the type of compensation to be provided;
 - If land is acquired for road construction, farmers will remain with small land holding sizes which will limit crop diversification
 - Farmers also noted that in some instances the payments are received very late beyond the dates which were communicated to the communities – this was noted as an area of grievance issue to be addressed through a Grievance Redress Mechanism (GRM) provided for in the ESMF;
 - some local leaders register family members who have not been involved in the actual works under the PWP for payment and the communities are afraid to report the malpractice because it starts with the local leadership – this was also noted and it was pointed out that instrument developed will look into all these issues
 - On the socio-economic costs and impacts to be generated, the farmers noted that where land will be acquired, this may lead to loss of land for human settlement, farming and grazing which may lead to loss of income generating capacity;
 - They also mentioned that the project will not be expected to affect cultural sites but appreciated that measures have been included in the preparation of the project to take care of such issues.

3.1.3 Issues raised:

- farmers wanted to understand at what point the beneficiaries will be sensitized because they noted that the information which was provided to them during the meeting was very important. It was explained that when the actual implementation starts, this will be done to the beneficiaries targeted in each of the districts identified;
- The farmers also expressed concern that the subsidy numbers are smaller and this is creating enmities amongst the community members and were requesting if there could be a way to increase the numbers; they also pointed out that there is little transparency in the manner in which the names are identified – most of the names are for people who are no longer alive
- They requested if for the roads there could be inclusion of culvert rings and gravel on the roads.

3.2 Staff:

- Staff expressed satisfaction that the introduction of the EIA is a good approach because if beneficiaries are affected they will be assisted
- They asked if the PWP component can complement with farming issues where the payment should not be in cash but in kind – inputs; the inputs should consider farmers’ preferences
- On land acquisition – they noted that this may not really be an issue because much of it will be rehabilitation of existing roads

4.0 Conclusion

The presentation assisted the farmers to appreciate the importance of instituting measures to address negative impacts which are likely to be experienced.

Annex 4: List of Participants during Consultations

4a. List of Staff

Districts : Lilongwe Date: 24th October, 2017

| NO. | NAME OF PARTICIPANT | ORGANISATION | POSITION | PHONE NO. |
|-----|-------------------------|-----------------------------------|-------------------|------------|
| 1. | Francis Mlongo | Agric | DAHLDO | 0888628468 |
| 2. | Manuel Kasenza | Public Works | DRS | 0888758968 |
| 3. | Joseph Katema | Agric | AEDC | 0998915339 |
| 4. | Joseph Nanthambwe | Agric | AEDC | 0999190060 |
| 5. | Smith Mkwapatira | Agric | AEDO | 0888655322 |
| 6. | Gift Matiya | Agric | AEDC | 0999736643 |
| 7. | Gloria Lidamlendo | Agric | Crops Officer | 0994898178 |
| 8. | Japhet Zingani | Agric | ABO | 0999669457 |
| 9. | Siliro Magomero | Agric | EMO | 0999228228 |
| 10. | Hyacinthe M. Jere | Agric | DADO | 0991588792 |
| 11. | Ian Saini | Agric | AGRESO | 0999023477 |
| 12. | Henry Hunga | DLRC | PLRCO | 0999380377 |
| 13. | Fred Nyirenda | KADD-MU | SLRCO | 0999450891 |
| 14. | Richard Mzumara | KADD-MU | PAO-CP | 0888505193 |
| 15. | Salim Mdoka | NS DAO | AO -C | 0994643777 |
| 16. | Davie Kaonga | NS DAO | LRCO | 0888552216 |
| 17. | Habil Kalumo | NOYD-NGO | M & E Officer | 0999673920 |
| 18. | Henderson Chikamaulanga | NASFAM-FO | District Manager | 0991011614 |
| 19. | David Ng'oma | NS DAO | AO- Legumes | 0991521763 |
| 20. | Eviness Nyalugwe | DCD-MoAIWD | DCD - HO | 0994025165 |
| 21. | John Ng'ambi | Roads Authority | Social Specialist | 0995411473 |
| 22. | Rexy Tolani | MoAIWD | PCA | |
| 23. | Sydney Nyanda | Agric | ALRCO | 0994760222 |
| 24. | McSosten Chikwatula | Agric | ADAELLA | 0999557238 |
| 25. | Chrispin Chilowe | Agric | AEDO | 0993643679 |
| 26. | Bright Kangachepe | Agric | FA | 0999192680 |
| 27. | Olive Kubwalo | Agric | SALRCO | 0888126304 |
| 28. | Beatrice Kalipinde | Agric | AEDO | 0999971283 |
| 29. | Vincent Kachilili | Agric | AEDO | 0991165087 |
| 30. | Angella Kakolo | LAFORD-NGO | PO | 0881259606 |
| 31. | Blessings Zembani | Farm Concern International-NGO | MTO | 0888597822 |
| 32. | Memory Saka | Agric | AEDO | 0888618363 |
| 33. | Cyben Kondowe | Agric | CPO | 0881627373 |
| 34. | Mike Nkhonjera | Agric | AEDO | 0888517043 |
| 35. | Gift Njolomole | WV-NGO | DF | 0992653668 |
| 36. | Eliza Ziba | Agric | Student | 0996515230 |
| 37. | Benson Chasambira | TAPP-NGO | Field Officer | 0999044839 |
| 38. | Christopher Chinkhadze | Agric | AEDO | 0994350167 |
| 39. | Gift Kapota | Agric | AEDO | 0999059674 |

| | | | | |
|-----|-------------------|-------|-----------------|------------|
| 40. | Eliza Wickson | Agric | Field Assistant | 0884350774 |
| 41. | Howard Mwambakulu | Agric | Enumerator | 0884188449 |

District ; Lilongwe Date : 24th October,2017

| NO. | NAME OF PARTICIPANT | ORGANISATION | POSITION | PHONE NO. |
|-----|---------------------|-----------------|-------------------|------------|
| 1. | Anthony T.M. Banda | Agric | AEDO | 0999007062 |
| 2. | Chifundo Mkanda | BASENDA | Field facilitator | 0991492273 |
| 3. | Christian Msachina | Agric | DAH | 0884230722 |
| 4. | Redson Sudzulani | Agric | DAH | 0884399364 |
| 5. | Andrew Madzi | Agric | DAH | 0881886758 |
| 6. | Simplex Joseph | Agric | FA | 0888709398 |
| 7. | Edwin Mphonde | Agric | DAH | 0999616104 |
| 8. | Uledi Isaac | Agric | V. Scout | 0995416073 |
| 9. | Hodges Nkhoma | Agric | AEDC | 0999645991 |
| 10. | Stanford Nkhonjera | Agric | AEDO | 0996325403 |
| 11. | Athanasius Foster | Agric | AEDO | 0884326222 |
| 12. | Clement C. Tumba | Agric | FA | 0884780367 |
| 13. | Joseoh Chakwanila | Agric | DAH | 0991235858 |
| 14. | Allan Kaziputa | Roads Authority | Enumerator | 0888639441 |
| 15. | George Lungu | DCD | PAO | 0995662550 |
| 16. | Gertrude Kambauwa | DLRC | DDECE | 0888321562 |
| 17. | Nixon Nyalugwe | LADD | PAO-CP | 0995497477 |
| 18. | Mercy Malumelo | LL DAO West | EMO | 0999893634 |
| 19. | Jacob Ngwira | Agric | AEDO | 0888745377 |

4b: List of Farmers

Districts: Lilongwe and Ntchisi Date : 24th October,2017

| SR NO | DZINA/NAME | UDINDO/POSITION | FONI NO |
|-------|----------------------|------------------|------------------------|
| 1. | Dustan Solomon | Secretary | 08881311759/0999490109 |
| 2. | Steven Nkhoma | Member | 0999749599 |
| 3. | Makiliwani Chisemphe | Oyanganira Msika | 0999749599 |
| 4. | Anna Singo | Lidi farm | - |
| 5. | Aginesi Mapulanga | Vice Secretary | 09992525954 |
| 6. | Malita Jelemiya | Lidi Farm | |
| 7. | Marcy Mapulanga | Settitarr | |
| 8. | Fuloresi Steven | Member | 0995359449 |
| 9. | Florence Kalowa | Member | |
| 10. | Martha Chisinga | Chair Lady | 0991958148 |
| 11. | Sadrack folochiya | Member | 0996566717 |
| 12. | Emma Kandaidi | Member | 0998498768 |
| 13. | Mikiel Missi | | 0995654663 |

| | | | |
|-----|-----------------------|-------------|-------------|
| 14. | Misheck Chawia | Member | 0991487852 |
| 15. | Manford Katonge | Farm leader | 09999190020 |
| 16. | Evely Chigoli | Treasurer | 0991521570 |
| 17. | Spiano Kamwala | Chairman | 0991487852 |
| 18. | Emmanuel Silvesta | Member | 0997937939 |
| 19. | Medson Mzelezea | Member | |
| 20. | Yona Matewera | Member | |
| 21. | Lunia Bowa | Member | |
| 22. | Mercy Mapulanga | Member | |
| 23. | Zecharia Chitsamba | Member | |
| 24. | Cliford Banda | Member | |
| 25. | Veronica Kamwala | Member | |
| 26. | Mercy Jeptala | Member | |
| 27. | Trexa Chananga | Member | |
| 28. | Anna Singo | Member | |
| 29. | Generate Jonathan | Member | |
| 30. | Chisomo Banda | Member | |
| 31. | Elia Sambo | Member | |
| 32. | Gladwell Malipenga | Member | |
| 33. | Grace Chifu | Member | |
| 34. | Esta Batison | Member | |
| 35. | Regina James | Member | |
| 36. | Joyce Jekapu | Member | |
| 37. | Colleta Banda | Member | |
| 38. | Stella Wilson | Member | |
| 39. | Magrete Tomas | Member | |
| 40. | Mpasulana Mpinganjira | Member | |
| 41. | Sana Chitute | Member | |
| 42. | Getrude Zezala | Member | |
| 43. | Grace Andrea | Member | |
| 44. | Eveness Majamanda | Member | |
| 45. | Agnsess Chikanamba | Member | |
| 46. | Lucy Daniel | Farmer | |
| 47. | Alice Paliani | Farmer | |
| 48. | Likiness Yakobe | Member | |
| 49. | Wadson Bello | Member | |
| 50. | Davie Ngwende | Member | |
| 51. | Peter Kavumbula | Member | |
| 52. | Bertha Zimba | Member | |
| 53. | Jossam Lumbe | Member | |
| 54. | Hellens Kalowanjombe | Member | |
| 55. | Marria Mwale | Member | |
| 56. | Matco Richard | Member | |
| 57. | Juliasi Phiri | Member | |
| 58. | Aganess Kamwala | Member | |
| 59. | Gift Banda | Member | |

| | | | |
|------|---------------------|-------------|-------------------|
| 60. | Agartha Mrluntha | Member | |
| 61. | Janet Benjamin | Member | |
| 62. | Olipa Banda | Member | |
| 63. | Sinolia Nthenda | Member | |
| 64. | Alice Paliani | Member | |
| 65. | Sara Chitute | Member | |
| 66. | Stella Wilson | Member | |
| 67. | Agness nthala | Member | |
| 68. | Malita Jeremia | Member | |
| 69. | Rose Kachepa | Member | |
| 70. | Felestina Mayembe | Member | |
| 71. | Lustia Mvula | Member | |
| 72. | Agness Cholamokanda | Member | |
| 73. | Sambo Kapophinda | Member | |
| 74. | Ganizani Chuma | Member | |
| 75. | Levison Malitano | Chairperson | 0996020794 |
| 76. | Kaneneni Machila | Member | |
| 78. | Ephraim Gwaza | Member | |
| 79. | Chiwoko | Member | |
| 80. | Samuel Chiwango | Member | |
| 81. | Kachoka Elisa | Secretary | 0993178060 |
| 82. | Harrison Chilamba | Member | |
| 83. | Essau Richard | | |
| 84. | Daniel Chibwe | Member | |
| 85. | Patrick Khumutche | Member | |
| 86. | Amon chizu | Member | |
| 87. | Dominic Lesio | Member | |
| 88. | Jambulani Banda | Member | |
| 89. | Foster Banda | Member | |
| 90. | Mgona Chilambo | Member | |
| 91. | Joel Malithano | Member | |
| 92. | Mark Phiri | Member | |
| 93. | James Mbande | Member | |
| 94. | Mkoma Shawa | Member | |
| 95. | Khalidwe Chiwaula | Member | |
| 96. | Joven Divala | Member | |
| 97. | Samson Mandala | Member | |
| 98. | Enelesi Chilamba | Member | 0995134637 |
| 99. | Christina Manuel | Member | |
| 100. | Agness Banda | Member | 0999132819 |
| 101. | Lingison Kafelo | Member | 0998742860 |
| 102. | Grace Jeriko | Member | 0996015603 |
| 103. | Enelesi Nkolola | Member | 0992110554 |
| 104. | Sisiliya Shawa | Member | 0997528639 |
| 105. | Chrissy Dzozi | Member | 0992880460 |
| 106. | Lesita Chiwengo | Member | |

| | | | |
|-----|---------------------------|--------------|-------------------|
| 107 | Faneki Soko | Member | |
| 108 | Mary Banda | Member | |
| 109 | Likistina Soko | Member | |
| 110 | Everesi Thauzeni | Member | |
| 111 | Agness Kasimpha | Member | |
| 112 | Alefa Chrford | Member | |
| 113 | Eniliya Banda | Member | |
| 114 | Mercy Chikalipo | Member | |
| 115 | Getrude Banda | Farmer | |
| 116 | Aida Makuta | Farmer | |
| 117 | Agness Mikiri | Farmer | |
| 118 | Magadalene Banda | Farmer | |
| 119 | Velentina Jossamu | Farmer | |
| 120 | Layina Tambala | Farmer | |
| 121 | Alefa Dzodzi | Farmer | |
| 122 | Zelinati Banda | Farmer | |
| 123 | Diseliya Sitaliki | Farmer | |
| 124 | Anna Jezala | Farmer | |
| 125 | CHRISSA Banda | VH | 0996566539 |
| 126 | Victoria Chiramba | VH | |
| 128 | Foster Banda | VH | |
| 129 | Mgona Chirambo | VH | |
| 130 | Joel Malithano | VH | |
| 131 | Marko Phiri | VH | |
| 132 | James Mbande | VH | 0995213914 |
| 133 | Mkoma Shawa | VH | |
| 134 | Khalidwe Chiwaula | VH | |
| 135 | Javeni Divala | VH | |
| 136 | Samson Mandala | VH | |
| 137 | James Bruce | VH Mbende | |
| 138 | Joevison Malitano | VH Kadzidzi | |
| 139 | Kachoka Elisa Pasipantima | GV Josam | |
| 140 | Efraim Gwaza | VH Jenala | |
| 141 | Samuel Chiwengo | VH Masiya | |
| 142 | Kaneneni Machira | VH Jaka | |
| 143 | Lingson James | VH Chikuhgwa | |
| 144 | Mkoma Shawa | VH | |
| 145 | Khalidwe Shawa | VH | |
| 146 | Khalidwe Chiwaula | VH | |
| 147 | Jambulani Banda | VH | |
| 148 | Maliko Phiri | VH | |
| 149 | Domoniko Lesiyo | VH | |
| 150 | Rabson Lpenga | VH | |
| 151 | Gidion Dambwe | VH | |
| 152 | Mgona Chilambo | VH | |
| 153 | Mary Banda | Farmer | |
| 154 | Enelesi Mkolole | Farmer | |

| | | | |
|-----|--------------------|--------|--|
| 155 | Richard Masarti | Farmer | |
| 156 | Paul Soko | Farmer | |
| 157 | Delivalia Shaliko | Farmer | |
| 158 | Malikesi Makiri | Farmer | |
| 160 | Jerina Thole | Farmer | |
| 161 | Elizabeth Chikugwa | Farmer | |
| 162 | Teleza Mngulu | Farmer | |
| 163 | Elizabeth Sitifano | Farmer | |
| 164 | Cathren Byson | Farmer | |
| 165 | Feliya Clement | Farmer | |
| 166 | Rosemary | Farmer | |
| 167 | Monika | Farmer | |
| 168 | Mesita Libisson | Farmer | |
| 169 | Rosemary Gladson | Farmer | |
| 170 | Eliasi Fiala | Farmer | |
| 171 | Vasco Kadzakuwani | Farmer | |
| 172 | Tchalesi Lekesoni | Farmer | |
| 173 | Zifa Kasintikita | Farmer | |
| 174 | Nebat Dambo | Farmer | |
| 175 | Esitele Biziwaki | Farmer | |
| 176 | Thom Fesitala | Farmer | |
| | | | |

Annex 5. Labor Influx Form

Approximate/Estimate Numbers on Labour Camps

| Project | Labor Camps (Location) | Approximate labour required | Number of Local Workers (From project area) | | | Number of Migrant Workers (From outside local area) | | | Local Absorptive Capacity | |
|---------|------------------------|-----------------------------|---|-----------|-------|---|-----------|-------|---------------------------|------|
| | | | < 100 | 100 – 200 | > 200 | < 100 | 100 – 200 | > 200 | Low | High |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

POTENTIAL SOCIAL RISKS (tick)/MITIGATION MEASURES IN PLACE

- Risk of social conflict
- Increased risk of illicit behavior and crime
- Influx of additional population (“followers”)
- Impacts on community dynamics
- Increased burden on and competition for public service provision
- Gender-based violence
- Child Sexual exploitation
- Child labor and school dropout
- Local inflation of prices
- Increased pressure on accommodations and rents
- Increase in traffic and related accidents
- Increased risk of communicable diseases and burden on local health services
- Other