



MALAWI GOVERNMENT

**MINISTRY OF LOCAL GOVERNMENT AND RURAL
DEVELOPMENT (MLGRD)**

**TRANSFORMING AGRICULTURE THROUGH
DIVERSIFICATION AND ENTREPRENEURSHIP**

(TRADE)



**ENVIRONMENTAL AND SOCIAL MANAGEMENT
FRAMEWORK**

(ESMF)

Prepared for:
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OTHER REPORTS IN THIS SERIES

The Transforming Agriculture Through Diversification and Entrepreneurship Programme (TRADE) Environment and Social Management Framework forms part of a series which is intended to provide complete documentation for the requirements of a holistic environmental and social risk management system for the programme. This Social, Environmental and Climate Assessment Procedures instrument contains the findings of a study conducted for the agriculture sector of the Government of Malawi and the instrument has been developed on the basis of the local conditions and findings. The following documents form the series:

Volume 1:

Environmental and Social Management Framework (ESMF)

Volume 2:

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LIST OF ABBREVIATIONS

4Ps	Public Private Producer Partnership
ABS	Agri Business School
ACIF	Agricultural Commercialization and Innovation Fund
ADC	Area Development Committee
ADD	Agriculture Development Division
AEDC	Extension Planning Area Coordinator
AEDO	Agricultural Extension Development Officer
AEO	Agriculture Extension Officer
ASP	Area Stakeholder Panel
BOD	Biological Oxygen Demand
BoQ	Bills of Quantities
CC	Climate change
CISANET	Civil Society Agriculture Network
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COD	Chemical Oxygen Demand
CPMs	Country Programme Managers
CPMTs	Country Programme Management Teams
DAC	District Agriculture Committee
DADO	District Agriculture Development Officer
DAECC	District Agriculture Extension Coordination Committee
DAESS	District Agriculture Extension Services System
DAO	District Agricultural Officers
DC	District Commissioner
DEC	District Executive Committee
DEO	<i>District Environmental Officer</i>
DSP	District Stakeholder Panel
EA	Environmental Assessment
EAD	Environmental Affairs Department
EDO	Environmental District Officer
EIA	Environmental Impact Assessment
EMA	Environment Management Act
ENRM	Environment and Natural Resource Management Policy
EPA	Extension Planning Area
ESA	Environmental and social Assessment
ESIAs	Environmental and Social Impact Assessments
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FAO	Food and Agriculture Organisation
FARMSE	Financial Access for Rural Markets, Smallholders and Enterprise programme
FBO	Farmer Based Organisation
FBS	Farm Business School
FPIC	Free, prior and informed consent)
GALS	Gender Action Learning System
GDP	Gross Domestic Product
GMO	Genetically Modified Organism
GoM	Government of Malawi
GRM	Grievance Redress Mechanism
GS	Guidance Statement
HIV	Human Immunodeficiency Virus
HQCF	High Quality Cassava Flour
IFAD	International Fund for Agricultural Development
IPCC	Intergovernmental Panel on Climate Change

IPM	Integrated Pest Management
IPMP	Integrated Pest Management Plan
M&E	Monitoring and Evaluation
MBC	Milk Bulking Centres
MBS	<i>Malawi Bureau of Standards</i>
MFAAS	Malawi Forum of Agriculture Advisory Services.
MITT	Ministry of Industry Trade and Tourism
MLGRD	Ministry of Local Government and Rural Development
MoAFS	Ministry of Agriculture and Food Security
MoAIWD	Ministry Agriculture Irrigation and Water Development
<i>MoH</i>	<i>Ministry of Health</i>
MoPHWR	Ministry of Public Works, Housing and Water Resources
MoU	Memorandum of Understanding
MSME	Micro, Small and medium-sized enterprises
NAPA	National Adaptation Plan of Action
NCE	National Council on Environment
NEAP	National Environmental Action Plan
NEP	National Environmental Policy
NGO	Non-Governmental Organisation
NPC	National Programme Coordinator
NRM	Natural Resources Management
NSSP	Malawi National Social Support Policy
O & M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
PAP	Project Affected People
PCB	Pesticide Control Board
PCP	Public Consultation Plan
PCR	Physical Cultural Resources
PDO	Programme Development Objective
pH	Acidity or Alkalinity of a Solution
PMU	Programme Management Unit
PPE	Personal Protective Equipment
PRIDE	Programme for Rural Irrigation Development
PRSP	Poverty Reduction Strategy Paper
PSC	Programme Steering Committee
RAF	Resettlement Action Framework
RAP	Resettlement Action Plan
RB-COSOP	Results Based Country Strategic Opportunities Programme
RLEEP	Rural Livelihoods and Economic Enhancement Programme
SDGs	Sustainable Development Goals
SECAP	Social Environment and Climate Assessment Procedures
TA	Traditional Authority
TCE	Technical Committee on the Environment
TDS	Total Dissolved Solids
TOR	Terms of Reference
TRADE	Transforming Agriculture through Diversification and Entrepreneurship programme
TSS	Total Suspended Solids
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
VAC	Village Agriculture Committee
VC	Value Chain
VDC	Village Development Committee
VSL	Village Savings and Loans Scheme

EXECUTIVE SUMMARY

The Government of Malawi (GoM) has identified the agriculture sector as the mainstay of the country's economy as it accounts for about 36% of the gross domestic product (GDP), and about 87% of the total employment. The agriculture sector supplies about 65% of the raw materials to Malawi's limited manufacturing sector, and is the most important source of income for the poor, accounting for about 63.7% of all income generated by households. In order to improve this sector, the Government is partnering with the International Fund for Agricultural Development (IFAD) to finance the proposed Malawi – Transforming Agriculture Through Diversification and Entrepreneurship Programme (TRADE).

The overall goal of TRADE is to contribute to improved sustainable livelihoods of rural people in Malawi. Whilst the Programme Development Objective (PDO) is *“Increased value chain commercialisation and resilience of rural poor and smallholder producers”*. This is in pursuit of the overall sector goal of contributing to the national efforts of ensuring food security, increased income levels and poverty reduction.

TRADE is integrated in nature, and will be implemented through three inter-linked components:

- (1) **Sustainable producer–private partnerships**; which will support smallholder farmers organized in producer groups in producer–private partnerships with medium and small businesses (MSMEs) to increase production and marketing of their products.
- (2) **Enabling environment for smallholder commercialisation**. This component will improve the enabling environment for commercial agriculture, including policies, regulatory framework and infrastructure development. It is comprised of two sub-components: (i) Enabling environment for commercial agriculture; and (ii) Enabling Infrastructure.
- (3) **Institutional support and Programme management and coordination**. The objective of this component is to strengthen the participation of smallholder farmers in commercial relationships with the market by developing an eco-system of services that will create inclusive and equitable win-win arrangements. This will be achieved through two sub-components: (i) Capacity building and value chain governance; and (ii) Programme management and knowledge management.

This document serves as an Environmental and Social Management Framework (ESMF) for the proposed Malawi – Transforming Agriculture Through Diversification and Entrepreneurship Programme (TRADE), which will ultimately be implemented initially in eleven(11) districts of Malawi with the potential to add another nine based on market demand for commodities to be identified. The Environmental and Social Management Framework has been prepared as a guide for the integration of environmental and social considerations in the planning and implementation of the proposed programme activities. It further provides a basis for environmental assessments of all sub-projects to be carried out under this proposed financing.

The basis for the preparation of the ESMF is that the proposed programme constitutes several components of activities, which will generate changes and effects of varying proportions to different components of the environment including land resources, water resources, atmospheric resources and biological diversity in the areas of activity. Thus, the generic ESMF is designed to establish in advance some appropriate level of environmental management measures for application in the range of programme activities from the planning stage to implementation.

The agriculture, roads and infrastructure sub-projects that will be implemented by TRADE fall under the prescribed list of projects for which Environmental Assessment (EA) work is mandatory prior to implementation under Malawian legislation. Under IFAD's SECAP the programme has been categorised as “A”, requiring the development of an Environmental and Social Management Framework (ESMF) as specific infrastructure sites are not known during design, prior to site specific environment work.

The EA work is necessitated by the fact that the project activities are likely to have detrimental environmental and/or social impacts. The activities include some amount of civil works, abstraction and use of natural resources such as water, depletion of forest resources and interaction of many people within the sub-project location areas. The activities will also generate impacts that may result in incidences of water-borne and water related diseases, pollution by agro-chemicals and degradation of wild lands. Consequently, several environmental components are affected in one way or the other by such activities.

A Policy and legal review of Malawi legislation established that the agricultural system is supported by a host of laws and regulations for the protection of humans and the environment at large. Among them the Environment Management Act, (1996) provides for the total protection of the environment. On the other hand, the IFAD SECAP require some measures to be taken to protect the physical environment from all forms of degradation and to prevent any potential social impacts.

The principal aim of this ESMF is to identify and evaluate potential environmental and social impacts associated with the agriculture and value addition Infrastructure Development Programmes and to provide mitigation measures for such impacts. The potential associated impacts were analysed and mitigation measures for the identified impacts proposed. The ESMF then establishes a unified process for addressing all environmental and social policy issues in sub-projects from preparation, through review and approval, to implementation. The lead implementing team (TRADE PMU) with the help of relevant authorities must monitor the environmental effects and the success of mitigation measures. This monitoring is an important part of managing the impacts of the programme.

The ESMF emphasises the need for continuous consultations with the stakeholders throughout the programme cycle to achieve successful implementation and monitoring. The implementing agency, has the responsibility to effectively engage stakeholders in achieving the programme objectives for the benefit of all. Through consultations, the TRADE PMU will create a bridge of communication between the public and the Government, which will improve the efficiency and transparency in the programme execution. A consultation plan was developed to provide a framework for achieving effective stakeholder involvement and promoting greater awareness and understanding of issues so that the project is carried out effectively within budget and on-time to the satisfaction of all concerned.

To ensure the successful implementation of the measures, the ESMF also defines the roles and responsibilities for all the players from National level down to the beneficiaries. It then spells out the implementation schedule for the ESMF, taking into account all activities related to the proposed measures (enhancement and mitigation), the monitoring program, consultations, and institutional arrangements. It further sets out the requisite budget for the whole programme.

In general the preparation of the ESMF consisted of the following aspects: (i) establishment of baseline socio-environmental conditions, (ii) review of policy, regulations, institutional framework, (iii) assessment of potential environmental impacts, (iv) assessment of potential social impacts (iv) preparation of the environmental mitigation plan and a monitoring plan and (vii) providing guidelines for the implementation of the measures. Thus, the ESMF ensures that the substantive concerns of the relevant IFAD SECAP and the Malawi legislation will be taken into account during the implementation of the selected agricultural activities.

1. BACKGROUND INFORMATION

1.1 INTRODUCTION.

This document serves as an Environmental and Social Management Framework (ESMF) for the proposed Malawi – Transforming Agriculture Through Diversification and Entrepreneurship Programme (TRADE), which the Government of the Republic of Malawi intends to implement in eleven (11) districts of Malawi with an additional nine districts to be covered based on commodities being identified, market demand and fund availability. The Environmental and Social Management Framework has been prepared as a guide for the integration of environmental and social considerations in the planning and implementation of the proposed programme activities. It further provides a basis for environmental assessments of all sub-projects to be carried out under this proposed financing.

Transforming Agriculture Through Diversification and Entrepreneurship Programme (TRADE) is integrated in nature, and will be implemented through three inter-linked components: (1) **Sustainable producer–private partnerships**; which will support smallholder farmers organized in producer groups in producer–private partnerships with Micro Small and medium-sized enterprises (MSMEs) to increase production and marketing of their products. (2) **Enabling environment for smallholder commercialisation**. This component will improve the enabling environment for commercial agriculture, including policies, regulatory framework and infrastructure development. It is comprised of two sub-components: (i) Enabling environment for commercial agriculture; and (ii) Enabling Infrastructure. (3) **Institutional support and Programme management and coordination**. The objective of this component is to strengthen the participation of smallholder farmers in commercial relationships with the market by developing an eco-system of services that will create inclusive and equitable win-win arrangements. This will be achieved through two sub-components: (i) Capacity building and value chain governance; and (ii) Programme management and knowledge management.

The programme design framework is presented in Figure 1-1, summarizing the components, subcomponents and the proposed programme interventions.

1.2 OBJECTIVES OF THE PROPOSED PROGRAMME

The overall goal of TRADE is to contribute to improved sustainable livelihoods of rural people in Malawi.

The Programme Development Objective (PDO) is *“Increased value chain commercialisation and resilience of rural poor and smallholder producers”*.

The objective will be achieved through targeted support to smallholder farmers to increase productivity through climate smart interventions; benefit from commodity markets, improved access to rural financial services, market and business development services; and enhanced partnerships with the private sector. TRADE will also support non-farmer value chain actors, such as commodity vendors and other rural entrepreneurs, focusing on youths and women to develop and sustain their agribusiness enterprise opportunities and also pay attention to achieving nutrition outcomes.

The key outcomes for achieving the objective of TRADE are:

- (i) smallholders producers’ productivity and produce quality increased;
- (ii) smallholders producers’ access to market increased;
- (iii) smallholders producers’ adoption of climate smart agriculture enhanced;
- (iv) enabling environment for commercialization of smallholder agriculture improved;
- (v) institutional performance and knowledge management improved.

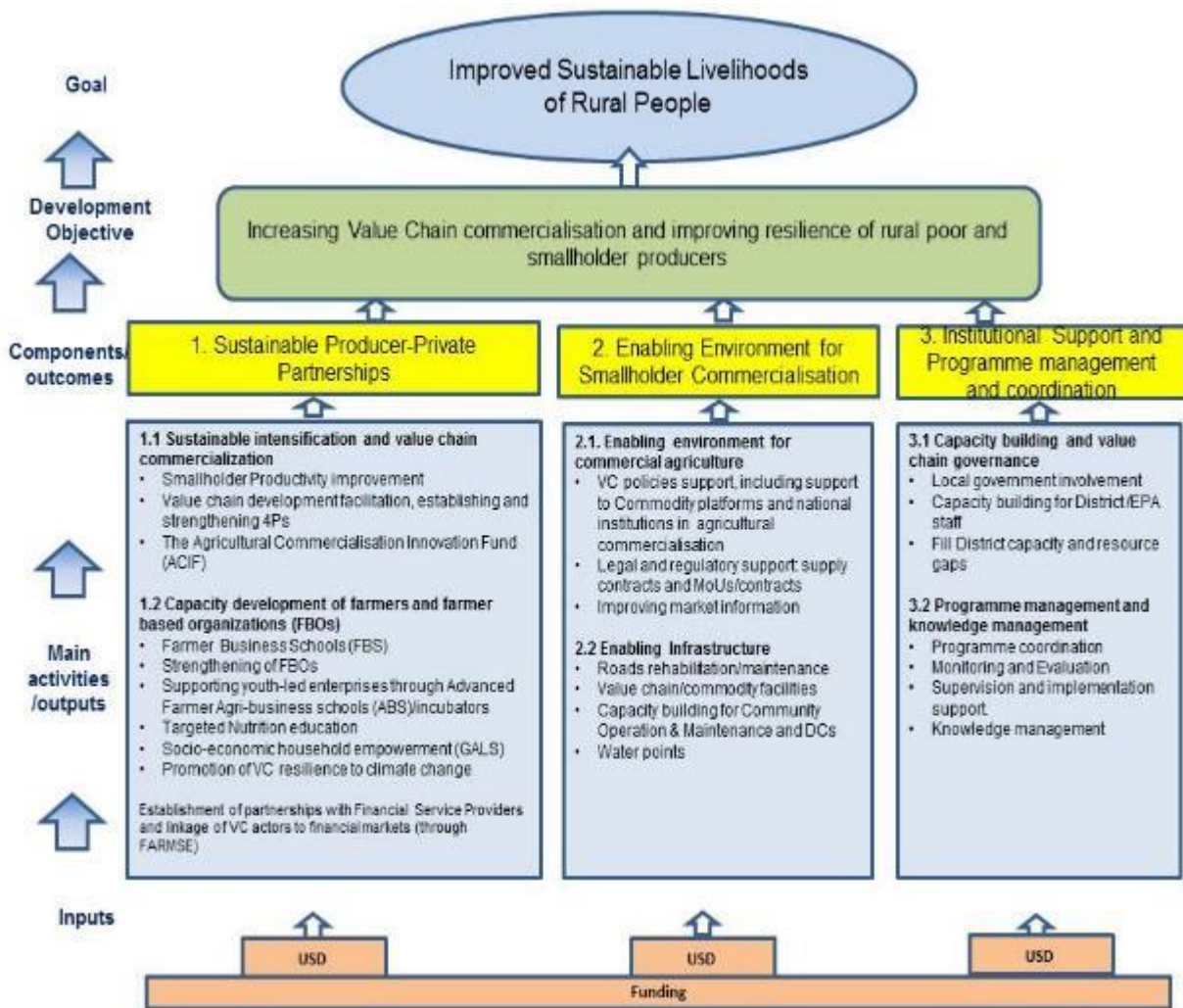


Figure 1-1 Programme Design Framework

1.3 GEOGRAPHIC AREA OF INTERVENTION.

TRADE will adopt a gradual market-driven approach in terms of geographic coverage, commodities and outreach. It will initially cover 11 districts and 7 commodities: groundnuts, soya bean, sunflower Irish potato, dairy, beef and honey, supported by RLEEP, so as to optimize the low hanging fruits and strengthen impacts and sustainability. Subsequently, it will add one or two new commodities, and expand to more districts¹.

¹ This could be about 9 more districts, since there are already indications that there are potential commercial opportunities in these districts for cassava, red sorghum and goat with partnership, between small producers and the private sector, and collaboration with other development partners.

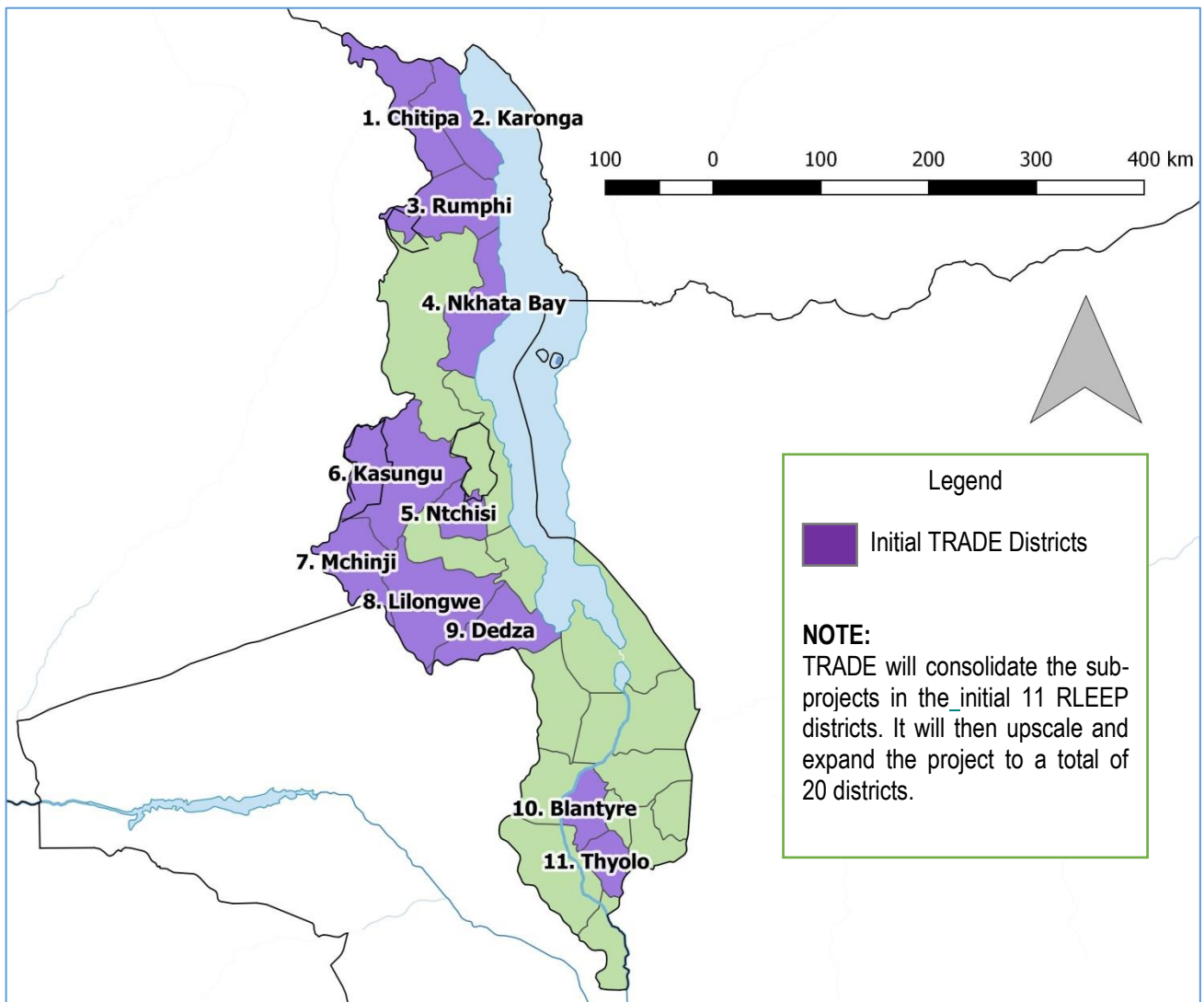


Figure 1-2 Map of Malawi Districts

1.4 IMPLEMENTATION ARRANGEMENTS

The lead implementing agency for TRADE is the Ministry of Local Government and Rural Development (MLGRD) under the overall leadership of the MLGRD Secretary supported by the Directorate of Rural Development. MLGRD will work closely with a wide range of stakeholders from public institutions and private sector, such as Ministry of Agriculture, Irrigation and Water Development (MoAIWD), Ministry of Industry Trade and Tourism (MITT), Ministry of Gender, Children and Community Development, Ministry of Civic Education and Social Welfare, Ministry of Transport and Public Infrastructure; Farmers Union of Malawi, Malawi Investment and Trade Centre, Malawi Bureau of Standards, Civil Society Agriculture Network (CISANET), commodity platforms, commodity up takers and other institutions supporting agri-business in Malawi.

The programme oversight will be provided by a programme steering committee (PSC) comprising both the public and private sector, chaired by the Secretary, MLGRD. Members of PSC will be Permanent Secretaries of key line ministries and executives of institutions mentioned above. The multi-sectoral composition of the PSC will ensure harmonization and integration of TRADE's support in government's programme and ensure its contribution to GoM's strategic priorities and sectoral development objectives.

Borrowing from the experiences of RLEEP, the Programme Steering Committee will be supported by a Technical Committee of which membership will be drawn from the technical professionals from institutions that form the PSC. The day-to-day implementation and coordination of the programme will be undertaken by a dedicated programme management unit (PMU) headed by a National Programme Coordinator (NPC) reporting to the Secretary, MLGRD. The PMU will be granted authority to undertake all financial and procurement management activities, lead and supervise programme implementation and provide specialist technical inputs.

1.5 TARGET GROUPS

TRADE will target 127,000 rural poor households with the principal target groups being the smallholder rural producers of which 50% of that target will be women and for each gender grouping 50% should be youth. Of these targeted households, 69,500 (including the former 37,500 RLEEP households) will be from 11 RLEEP districts to consolidate good practices and strengthen the results achieved in RLEEP supported VCs; and 57,500 households targeted for scaling-up of good practices and additional value chains in the potential new districts. TRADE will focus on rural households with potential to improve their participation in the commercialisation of selected commodity chains and subsequently graduate from poverty. However, it will extend its outreach to some of the very poor households through employment opportunities generated by commercial and infrastructure development. TRADE will tailor interventions to the needs of different groups of the poor as categorized by the Malawi National Social Support Policy (NSSP)².

The primary target groups for TRADE are: (i) Moderately/transient poor households who are economically active, produce some surplus for market, often food secure and have ability to move out of poverty but at risk of slipping back into the lower ranks of poverty due to economic or climate shocks; (ii) Ultra-poor but non-labour constrained households who are dominantly subsistence producers, often foods insecure with potential to graduate to higher poverty ranks. It is further recognized that better off farmers and other VC actors will play a critical role in value chain development. As such TRADE will further target on-farm producers and non-farm VC actors, such as transporters, commodity aggregators and traders.

In order to reach the intended beneficiaries and mitigate against elite capture, TRADE will use selected targeting mechanism including direct targeting and self-targeting, supported by empowering and enabling measures.

1.5.1 Targeting and Social Inclusion Strategy: Within the main broad target groups described above, TRADE will focus its support to households who are actively engaged in production of the priority commodities, or have the potential to become engaged, and are located in areas where production of the priority commodities is concentrated. The programme targeting approach has three important aspects: (a) ensure selection of new value chains that have credible potential for women and youth's inclusion through a targeting strategy (community mobilization, sensitization, communication) (b) nutrition value ; (c) mapping of production, market demand, stakeholders, poverty, social and demographic trends to determine geographical locations (i.e. Districts and EPAs); (d) targeting in EPAs will be based on potential of poor smallholder producers, women and youth to profitably engage in the particular VC; (e) targeted delivery mechanisms.

1.5.2 Gender and youth mainstreaming: Building on RLEEP's success in reaching 55% women and 43% youth, TRADE will target at least 50% women as well as 50% youth between 18 and 35 years. Among the youth the programme will aim to achieve 50:50 gender parity as well as recognize the different age ranges (18 – 24 years and 25 – 35 years). TRADE will ensure that key stakeholders understand the programme's commitment to pro-poor, gender and youth inclusion. TRADE will develop an elaborated targeting strategy, including a gender and youth mainstreaming action plan at the inception of the programme in order to provide systematic coordination for targeting and social inclusion. A well-structured arrangement will be put in place to ensure effective coordination and tracking of interventions at PMU, District and EPA levels, including collection of gender disaggregated data, set quotas of 50% women and youth participation, etc. Capacity building of programme staff and implementing partners in targeting, gender and youth mainstreaming and its tracking will be supported among other interventions and gender awareness module will be incorporated in different capacity building packages/manual. TRADE will implement the Household

² Malawi National Social Support Policy (NSSP) detailed classification of poor rural households has five categories: (i) ultra-poor labour constrained; (ii) ultra-poor but non-labour constrained; (iii) poor but food secure; (iv) vulnerable to poverty; and (v) resilient to poverty.

Approach (HA) and Gender Action Learning System (GALS) to empower of all household members participating in VC development activities in component 1. GALS training will also be delivered to selected Districts and EPA staff under component 3.

1.6 ENVIRONMENTAL SUSTAINABILITY

The sustainability of TRADE is ensured by the Programme's participatory design process which guarantees that TRADE responds directly to community concerns and national development policies and strategies. The effort to create ownership of the Programme from the very beginning (through extensive stakeholder consultation) have provided the foundation and necessary commitment for post-TRADE sustainability. To enhance environmental sustainability and climate resilience, the Programme will promote sustainable natural resource management practices and climate smart agriculture technologies and practices. Climate smart agricultural technologies or practices are expected to increase productivity, enhance resilience and reduce carbon emissions.

2. PURPOSE OF THE ESMF

2.1 JUSTIFICATION FOR THE PREPARATION OF THE ESMF.

The need to develop an ESMF for the programme emanates from the following observations, among others:

- Under section 24 (1) of Malawi Governments' *Environmental Management Act, Number 23 of 1996* and *Government of Malawi's' Guidelines for Environmental Impact Assessment of December, 1997*, the proposed Transforming Agriculture Through Diversification and Entrepreneurship Programme (TRADE) falls under the prescribed list of projects for which Environmental Assessment (EA) work is mandatory prior to implementation (*List A, page 25 of the guidelines*). The basis is that the proposed project constitutes several components of activities, which will generate changes and effects of varying proportions to different components of the environment including land resources, water resources, atmospheric resources and biological diversity in the areas of activity. Thus, the generic ESMP in the ESMF is designed to establish in advance some appropriate level of environmental management measures for application in the range of programme activities from planning stage to implementation.
- The proposed TRADE is classified as a **Category A**, under the IFAD SECAP. **Category A** projects require some environmental Assessment before implementation since such projects are likely to have detrimental and site-specific environmental and/or social impacts. The main risks will emanate from the rehabilitation works on roads above the length of 10 km and the rehabilitation and construction of other agriculture infrastructure like warehouses.

2.2 PURPOSE OF THE ESMF

The aim of the environmental and social management framework is to identify the potential negative and positive impacts which would require attention, and prescribe the possible mitigation measures that can be implemented. The ESMF will be used by TRADE in order to ensure that all potential environmental and social risks are adequately addressed and that the relevant capacity building and training needs are established in order for the recommended measures to be implemented effectively.

The main purpose of the ESMF is to:

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

The ESMF provides a guide for the integration of environmental and social considerations into the planning and implementation of the proposed agriculture related project activities. It further provides a basis for environmental assessments of all sub-projects to be carried out under this proposed financing.

It focuses on the nature and extent of significant adverse environmental impacts that may result from any rehabilitating, up-scaling, replication and development of new agricultural activities. The ESMF also serves as a framework for screening environmental issues for all possible agricultural activities that will be undertaken. It establishes a unified process for addressing all environmental and social safeguards issues on sub-projects from preparation, through review and approval, to implementation.

The ESMF also describes a process that will ensure that the substantive concerns of the relevant IFAD's SECAP and Government of Malawi legislation are addressed during the implementation of the selected agricultural activities.

2.3 APPROACH TO THE PREPARATION OF THE ESMF.

The focus of the assignment is to highlight the potential environmental and social impacts for the planned future activities of the programme, and recommend a management plan for addressing potential negative impacts. In order to achieve these targets, the basic tenet of the strategy involved high degree of consultations with the various

stakeholders. The rationale of these extensive consultations was to take on board views from a cross section of people, at least from local level, district level, and central government level.

The strategies of executing this assignment followed the following five steps:

- (a) Review current conditions of the existing agricultural activities, and provide an assessment of their status and operation levels;
- (b) Review of typical implementation approach and processes for the proposed up-scaling and development activities within the smallholder agricultural sector;
- (c) Identification and analysis of potential environmental and social impacts the implementation processes will likely trigger and generate within and around the up-scaled agricultural activities;
- (d) Development of a screening process for negative impacts for proposed programme sites and activities;
- (e) Identification of appropriate mitigation measures for the predicted impacts and compilation of a management plan for addressing environmental and social impacts during implementation, operation and maintenance of the programme activities.

In general, the study was then prepared in accordance with applicable IFAD's SECAP and policy documents and Malawi environmental impact assessment guidelines. The distinct phases of the study include:

- Data Gathering;
- Literature review;
- Reconnaissance Surveys and visits to potential sub-projects sites;
- Characterization of the baseline conditions;
- Identification of potential impacts;
- Identification of impact mitigation measures;
- Preparation of an Environmental and Social Management Plan; and
- Preparation of sub-project guidelines

The consultant assembled and evaluated relevant baseline data related to the physical, biological and socio-cultural environment of the country through a number of research methods, which include field surveys, and investigations, stakeholder consultations, review of related literature from published and unpublished documents:

(i) Field surveys.

The consultants undertook site investigations and field surveys to selected districts between 19 June and 6 July 2019. The consultants, with the support from the FARMSE Project Management Team selected and visited a representative sample (20% of the initially known Programme Districts) of the potential sub-project sites (including some existing projects which were used as examples). All the Value Chains that were supported in RLEEP were assessed and the visited Districts include, Thyolo, Kasungu, Mchinji, Nkata Bay, and Karonga.

The field surveys enabled the consultants to identify the environmental setting of the agricultural activities, identify some of the existing physical conditions and gaps within the programmes. In addition, the site visits allowed consultations with district agricultural officers, ground level staff such as the agricultural extension staff and programme beneficiaries on their perceptions of the current problems, as well as the potential impacts of the proposed programme.

(ii) Stakeholder consultations.

A series of stakeholder consultations were conducted throughout the study period. The list of the stakeholders who were consulted is included in Appendix 6. Some of the consultations were round table discussions and/ or focus group discussions. A questionnaire was also administered during the consultations. The following stakeholders were consulted:

- Ministry of Local Government and Rural Development (MLGRD)
- Ministry of Agriculture, Irrigation and Water Development (MoAIWD),
- Ministry of Industry Trade and Tourism (MITT),
- Ministry of Gender, Children Disability and Social Welfare,
- Ministry of Civic Education and Community Development,

- Ministry of Transport and Public Infrastructure;
- Ministry of Environment
- Farmers Union of Malawi,
- Malawi Investment and Trade Centre,
- Malawi Bureau of Standards,
- Civil Society Agriculture Network (CISANET),
- FARMSE PMU
- Farmer groups:
 - Milk bulking centres,
 - Cooperatives,
 - Warehousing Associations,
 - Irrigation Schemes,
 - Bee keepers Associations,
 - Cattle Market Associations
 - Smallholder farmers
- District Council Staff:
 - District Animal Health and Livestock development Officer
 - District Agriculture Development Officer (DADO)
 - Director of Planning Development (DPD)
 - Environmental District Officer (EDO)
 - Assistant Veterinary Officer (AVO)
 - Agriculture Extension Development Coordinator (AEDC)
 - Agri-Gender Roles and Extension Support Services Officer
 - Public Works Departments
- Agro- dealers
- Local Leadership
 - Traditional Authorities,
 - Senior Chiefs
 - Chiefs,
 - Village Heads
- Aggregators

2.4 FORMAT OF THE ESMF REPORT

This ESMF is organized in thirteen chapters:-

Chapter One provides background information to the proposed TRADE. It outlines the objectives of the programme, its rationale, geographic area of intervention and implementation arrangements. It also defines the target groups and environmental sustainability of the programme.

Chapter Two outlines the objectives of the ESMF and the approach and methodology that were taken in developing the Framework. It then gives an outline of the format of the whole report.

Chapter Three describes Malawi's relevant policies, laws and institutional set up which regulate and manage resource utilization, protection of sensitive areas including aquatic and land ecosystems, land use control and protection of endangered species. It then explains in general terms the institutional set up which supports the regulatory framework. It also reviews the international conventions relevant to this programme and compares the IFAD SECAP requirements with the laws of Malawi.

Chapter Four provides an overview of the programme description such as the major components, proposed impact areas, its current status and a review of the conditions of natural resources in the country.

Chapter Five outlines the Environmental and social assessment process that was applied in the current study. It states the exclusion list, and defines the sub-project site selection process, and screening. It then gives an environmental and social analysis of the sites that were visited during the public consultation process.

Chapter Six outlines the beneficial and adverse impact analysis, i.e. nature and scopes of the impacts of the proposed activities under the proposed programme, the environmental and social components likely to be affected by the programme activities, the nature and potential sources of the main environmental and social impacts in the implementation and operation of the activities. Thus, the section identifies the impacts and rates their significance/magnitude.

Chapter Seven outlines the typical environmental management plan for the impacts for integration into the agriculture related project activities. The plan includes responsible authorities for collaboration in the implementation of the mitigation measures. The chapter includes recommendations of appropriate monitoring activities by different stakeholders at local, district, and national level to ensure compliance with mitigation measures.

Chapter Eight describes the Public Consultation plan. It outlines the importance of continuous consultation with relevant stakeholders throughout the project implementation cycle to ensure the success of the programme. It identifies the measures which need continuous consultations and then defines the structure of the consultations and the reporting and disclosure requirements.

Chapter Nine outlines the monitoring Plan. The lead implementing Agency (MLGRD) with the help of relevant authorities must monitor the environmental effects of programme implementation and the success of mitigation measures.

Chapter Ten describes the relevant environmental and social training and capacity building measures for stakeholders at all levels to adequately participate in the implementation. The chapter includes specific training activities for the stakeholders and the cost estimates to facilitate the training programme.

Chapter Eleven describes the funding arrangements and gives a budget for the implementation of the ESMP.

Chapter Twelve outlines the implementation arrangements for the programme. It defines the roles and responsibilities of the lead implementing agency and all the key players, including the reporting requirements.

Chapter Thirteen Provides a conclusion of the findings of the ESMF, drawing from all the analysis from the preceding chapters.

References, The literature which was used in the study is then listed and,

Appendices Eight appendices are then attached at the end of the report covering (i) the environmental and social screening form; (ii) Environmental and social field appraisal form; (iii) Guidelines for annual reviews; (iv) Guidelines for annual report; (v) Summary of IFAD's SECAP and relevant Policies; (vi) Proof of Public Consultation; (vii) Guidelines for the development of ESMPs; (viii) TRADE Grievance Redress Mechanism.

3. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

3.1 INTRODUCTION

The Government of Malawi is applying a republican constitution, and a number of policies and legislation with the ultimate aim of promoting and consolidating sustainable socio-economic development in the country through the mainstreaming of environmental considerations in project planning and implementation. These include: the National Environmental Action Plan, the National Environmental Policy, the National Land Policy, Vision 2020, the National Growth Strategy, the National Irrigation Development Policy and Strategy, the National Land Use and Management Strategy, the Malawi Poverty Reduction Strategy Paper, the Decentralization Policy, the Environmental Management Act, and Local Government Act among others. The following paragraphs highlight some selected policies and laws which are applicable in the planning and implementation of public sector projects, more especially those in the agricultural and irrigation sector.

3.2 THE REPUBLIC OF MALAWI CONSTITUTION, 1995.

The Constitution of Malawi, came into force in 1995. It established a republican form of government, providing for the separation of judicial, legislative and executive powers. Section 13 (d) of the Constitution sets a broad framework for sustainable environmental management at various levels in Malawi. Among other issues it calls for prudent management of the environment and accords future generations their full rights to the environment. The constitution also provides for a framework for the integration or application of international environmental and foreign case law into the national legal system.

3.3 THE POLICY FRAMEWORK

From the discussions with government officials it is clear that there is political will to improve the working conditions and production of agricultural activities. However, in the Malawi Poverty Reduction Strategy Paper (PRSP), the government put more emphasis on industrial than agricultural operation, as it has greater potential for economic development. Agriculture is however seen as the main stay and readily available means of livelihood for the poorest section of the population and as such it has to be supported.

The analysis of policies related to agriculture social issues and the environment is necessary because TRADE has to observe the requirements of the various policies of the government in planning and implementation. The relevant policies include: the National Environmental Action Plan, the National Environmental Policy, the Malawi National Land Policy,

3.3.1 National Environmental Action Plan (NEAP)

The Malawi National Environmental Action Plan (NEAP) is a framework for integrating the environmental planning into the overall socio-economic development of the country through broad public participation. NEAP highlights key environmental issues that need to be addressed in any developmental project and they 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 for actions to be taken by stakeholders such as local communities, government, agencies, non-governmental organizations and donors in environmental planning and management and TRADE will have to take note of these guidelines as it implements its sub-projects.

3.3.2 National Environmental Policy (NEP)

National Environmental Policy (2004) is based on the principles of the National Environmental Action Plan, and provides the 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 TRADE programme. Potential negative impacts would be loss of trees, increase of soil erosion from land levelling and loose soils, ground water pollution from oils from leakages from construction vehicles among others. As a requirement under the environmental policy, TRADE will have to institute adequate measures for protection of the environment. This will be done by implementing an appropriate environmental management plan during sub-project implementation and operation. Thus, all sub-project developments must ensure that all their proposed activities conform to this policy to ensure environmental sustainability of the programme.

3.3.3 The National Decentralization Policy

Since 1998, Malawi Government embarked on a nationwide decentralization programme to devolve political and administrative powers to resource custodians and users at district and grass root level. The National Decentralisation Policy, under way in Malawi, is the key policy that aims at promoting effective local participation in development planning and resource management.

The implementation of TRADE will take into consideration the fact that the centres of implementing government projects were moved to district levels, with an emphasis on public participation in the governance and development of districts.

3.3.4 The National Water Resources Management Policy 2005

The Government of Malawi adopted the water resources policy in 2005 with the aim of providing a comprehensive and integrated water resource conservation and management within the country. The Ministry of Water Development is responsible for the coordination of the implementation of the policy. The objectives of the water policy are to address all aspects of water including resource management, development and service delivery. The policy articulates its vision as “water and sanitation for all always”, thus embracing and reflecting on the Government’s overall development objectives of poverty reduction and economic prosperity and its goal for sustainable management and utilisation of water resources in order to provide water of acceptable quality and of sufficient quantity.

All these objectives of the water policy are to be considered in the sub-project implementation, so that any utilisation of the water resources will be done sustainably and efficiently in pursuit of personal and national development.

3.3.5 The National Land Policy, 2002

The National Land Policy was adopted in 2002 and focuses on land as a basic resource common to all people of Malawi. The policy provides opportunities for the people of Malawi to embark on a path of socially and environmentally sustainable development. In addition, the policy highlights a number of approaches for redressing problems facing land resources. Some of the relevant provisions to the proposed TRADE are as follows:

- The policy recognizes agriculture development as the major benefactor land use sector. The policy guarantees full legal protection to the customary land tenure to the people of Malawi in order to enable the ordinary Malawians to adequately participate in agricultural activities and other rural livelihoods.
- The policy recognizes several sectoral policies and strategies in physical planning fisheries, environment, forestry, irrigation and wildlife and for this reason; it encourages multi-sectoral approach in land use and management at local and districts level.
- The policy recognizes environmental impact assessment of all big land development projects, and those planned in fragile ecosystems in order to protect biodiversity and water resources.

Thus, all the sub-projects of TRADE will work within the requirements of the land policy in order to realise socially and environmentally sustainable development.

3.3.6 National Agriculture Policy (2016)

Malawi Government has developed a National Agriculture Policy to coordinate all efforts towards sustainable agriculture development. The policy includes commercialization of 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 competitiveness in the agricultural sector. TRADE incorporates both these aspects. In terms of environmental management, the policy advocates for conservation agriculture best practices.

3.3.7 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 policies 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 TRADE programme 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.

3.3.8 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, and rural areas. The National HIV/AIDS Policy identifies migrant workers (mobile population) and women as highly vulnerable people to transmission of HIV and AIDS and other sexually transmitted diseases. Sub – projects under TRADE 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, during the implementation of TRADE, the following mitigations measures are recommended:

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

3.3.9 National Gender Policy (2000)

The National Gender Policy (2000) 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 TRADE has to integrate consideration of needs of women, men, boys and girls in programme 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 pro interventions in order to enhance income for both men and women;

3.4 LEGAL FRAMEWORK

The following is an outline of the Acts and their regulations that are related to agriculture social issues and the environment and will be applicable in the implementation of TRADE.

3.4.1 The Environment Management Act, number 23 of 1996

The Environment Management Act number 23 of 1996 provides the basic legal and administrative framework for environmental planning and management including environmental impact assessment for prescribed projects. The administration of environmental impact assessment is managed by the Director for Environmental Affairs in the Environmental Affairs Department (EAD) of the Ministry of Mines, Natural Resources and Environmental Affairs.

Section 9 of the Environment Management Act sets out the powers, functions and duties of the Department of Environmental Affairs and those of the Director of Environmental Affairs.

Section 10 has provisions for the establishment, powers and duties of the National Council on Environment (NCE). This is a policy making body which advises the Minister and the government on all matters regarding mainstreaming of environmental planning in public and private sector projects. Its role includes overseeing the processing of environmental impact assessments. The Department of Environmental Affairs provides secretarial services to both the Technical Committee on Environment and the National Council on Environment.

Section 16 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 and is the technical arm for the Department of Environmental Affairs which provides technical expertise and recommendations on matters of environmental planning and management including environmental impact assessment of projects.

Section 24 of the Environmental Management Act specifies the steps to be followed in the preparation of project impact assessments. In compliance to **section 24** of the act, the Guidelines for Environmental Impact Assessments were put in place in December 1997. The guidelines provide a list of prescribed projects for environmental impact assessment.

Section 27 of the act specifies that any project subject to environmental impact assessment cannot be approved by any licensing authority in Malawi for implementation until a satisfactory impact study report is approved and a certificate is issued by the Director for Environmental Affairs.

3.4.2 The Pesticides Act No. 12 of 2000

Pesticide Act No. 12 of 2000, provides the legal and administrative framework for registration, procurement, distribution, export, importation, storage, usage and disposal of the pesticides and related materials. Largely, 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 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.

The implications of this act on the TRADE Programme is that the majority of the sub-projects will be agricultural projects which will inevitably deal with pests and diseases and therefore will have to invoke the requirements of this Act when dealing with pesticides and agro-chemicals required to address the pests and diseases. Hence the use of pesticides by the sub-projects must conform to the Act and in addition, to the requirements of Integrated Pest Management, (IPM).

3.4.3 The Local Government (Amendment) Act, 2017 (No. 10 of 2017)

This Act amends the Local Government Act in provisions concerning land matters consequential upon the enactment of the Land Acquisition (Amendment) Act 2016 and the Land Act 2016. In general, the Act established district authorities to spearhead local planning and development. The act provides a wide range of duties to the local Government authorities including environment management of their respective areas.

In the context of the proposed TRADE programme, it is expected that local authorities in the selected programme districts will play a pivotal role in the implementation process under the supervision of the District Agricultural Development Officers (DADO).

Pursuant to the requirements under the National Decentralization Policy and the Local Government Act, the process of decentralizing environmental management to district level under the auspices of the Ministry of Natural Resources, Energy and Environment, has been successful. District Environmental Offices have been established, and are functional country-wide. In addition, district environmental sub-committees have been formed and trained in decentralized environmental management system. Every district has prepared and put in place a District

Environmental Action Plan for synchronizing environmental planning in socio-economic development activities within the district.

3.4.4 The Water Resources Act, 2013 (No. 2 of 2013)

Two main statutes which regulate water resource protection, conservation, planning and catchment management are the Water Resources Act, 2013 and the Water Works Act of 1995.

The Water Resources Act, 2013, provides for the management, conservation, use and control of water resources; For the protection of the quality and quantity of water resources; for the acquisition and regulation of rights to use water; and for matters connected therewith or incidental thereto. It is the legal framework for the establishment, powers and duties of the Water Resources Board. This is a policy making body which advises the Minister and the government as a whole on all matters regarding water resource protection, abstraction, conservation, planning and catchment management. Its role includes overseeing the processing of application for water rights and monitoring water abstraction.

The Water Works Act of 1995 provides the legal framework for the establishment of the three regional water boards, namely The Southern Region Water Board, The Northern Region Water Board and Central Region Water Board. These boards provide water supply and catchment management in their respective geographical command areas.

The Ministry of Water Development is responsible for the following issues, which relate to agricultural water:

- Protection of water resources and catchments management.
- Water resource planning and development
- Review of applications for water abstraction
- Water quality management including control of pollution.
- Maintenance of the water resource data bases

The TRADE sub-projects which will require to abstract water, should comply with the water abstraction requirement of this Act.

3.4.5 Occupational Safety, Health and Welfare Act (1997)

The Occupational Safety, Health and Welfare Act (1997) provides regulatory mechanisms to ensure safe and secure work places in Malawi. 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. Some of the important provisions include the following;

- Non – compliance or negligence on use of work safety facilities is an offence under sections 82 and 83 of the Act.
- Under section 6 and 7 of this Act, all work places require work place registration certificates from the Director of Occupational Safety, Health and Welfare in the Ministry of Labour and Vocational Training.
- Section 58 stipulates the provisions of protective clothing (such as gloves, foot wear, screens and goggles, ear muff and head covering) to protect workers from excessive exposure to nuisances with some work activities.
- 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 TRADE programme include the provision of necessary work place environmental health safety measures within construction sites and in the value addition processes like production of cooking oil. 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.

3.4.6 Land Act and Land Acquisition Act

The Land Act provides for the management of land tenure and land use issues. Section 27 and 28 of the Act guarantees landholders for appropriate compensation in the 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.

On the other hand, the 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. The District Commissioner assists in transportation and provisions of necessary services on new sites of resettlement.

Implications for the law on the programme include land acquisition for Warehouses, Milk Bulking Centres, agricultural fields and rural market centers and potential risks of movement of people from some places to pave way for sub-projects. The Project Management Unit (PMU) and the District Councils will need to adhere to sections 6-14 of Land Acquisition Act.

3.4.7 Public Health Act (1966)

The Public Health Act provides the 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 TRADE programme, and these are:

- the provision of appropriate toilets and provision of proper storm water drains around feeder roads and
- Contractors will have in place adequate temporary toilets for both female and male workers during construction periods.

3.5 REGULATIONS AND GUIDELINES

3.5.1 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 the case of the TRADE, 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.

3.5.2 The Malawian Project Categorisation

The Malawian legislation classifies projects and activities into three categories as follows:

- 1. Prescribed list A: Projects for which EIA is mandatory. (Large scale)**
 - A1. Agriculture /Aquaculture Projects
 - A2 Projects in The Food and Beverage Production Industry
 - A3 Water Resources Development

- A4 Infrastructure Projects
- A5 Waste Management Projects
- A6 Energy Generation, Transmission and Storage Projects
- A7 Industrial Projects
- A8 Mining and Quarrying Projects
- A9 Forestry Projects
- A10 Land Development, Housing and Human Settlement Projects
- A11 Remedial Flood and Erosion Control Projects
- A12 Tourism Development Projects
- A13 Projects in Proximity to Or Which Have the Potential to Affect various ecosystems like water bodies, wetlands and areas of unique historical or cultural significance.
- A14 Major Policy Reforms

2. Prescribed List B: Projects for Which EIA May Be Required (Small scale)

- B.1 Agriculture/Aquaculture Schemes
- B.2 Drainage and Irrigation
- B.3 Forestry and Logging Schemes
- B.4 Industry
- B.5 Infrastructure
- B.6 Land Development
- B.7 Mining
- B.8 Energy Generation, Transmission and Use
- B.9 Tourism
- B.10 Waste Treatment and Disposal
- B.11 Water Supply
- B.12 Health and Population
- B.13 Areas Protected Under Legislation
- B.14 Areas Containing Rare or Endangered Flora and Fauna
- B.15 Areas Containing Unique or Outstanding Scenery
- B.16 Tribal Habitats

3. Non – Prescribed: Projects not listed above

3.6 ADMINISTRATIVE FRAMEWORK FOR EIAs

In Malawi, Environmental Affairs Department in the Ministry of Natural Resources, Energy and Environment provides an administrative framework for environmental impacts assessments for prescribed projects. The department is based in Lilongwe, and is led by the 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 the Environment Management Act. It provides expert advice to the Environmental Affairs Department on a wide range of 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 NCE is a policy making body and is made up of Permanent Secretaries of government ministries and selected parastatals. The 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 NCE

3.6.1 Summary on Procedures for the Implementation of TRADE Sub-Projects

Based on reviews of the requirements of several other national policies and pieces of legislations in the sections above, the table below provides a summary of relevant statutory and regulatory approvals and licenses to be

obtained in the course of implementation and operation activities. This is to ensure that the project is in line with sound 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 programme 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.

Table 3-1 Summary on required procedures for licenses, approvals and permits of TRADE sub-projects

No.	List of statutory approvals or licenses to be obtained	Regulatory frameworks	Responsible department	Responsible officer
<i>General Environmental Aspects</i>				
1.0	Environmental Impact Assessment Certificate. <i>To guide the synchronization of environmental management practices</i>	Environment Management Act number 23 of 1996	Environmental Affairs Department	Director of Environmental Affairs
<i>Agriculture</i>				
2.0	Registration certificate for pesticide storage and use	Pesticide Act No. 12 of 2000	Pesticide Control Board	Registrar of Pesticides
<i>Occupational Health, Safety and Welfare</i>				
3.0	Workplace Registration Certificate. <i>To guide on procedures on workers' environmental health, safety during implementation and operations.</i>	The Occupational Safety, Health and Welfare Act (1997)	Ministry of Labor and Vocational Training	Director of Occupational Health, Safety and Welfare
<i>Water</i>				
4.0	Water Rights for Abstraction. <i>To regulate mechanisms of water abstraction from rivers during road construction</i>	Water Resources Act, 2013 (No. 2 of 2013) Water Resources (Water Pollution Control) Regulations and Malawi Bureau of Standards	National Water Resources Authority	Executive Director
<i>Land</i>				
	Land management and acquisition. <i>Land tenure and expropriation issues</i>	Land Act and Land Acquisition Act	Ministry of Lands	Director
<i>Local Governance</i>				
	local planning and development <i>License for Localization, spearheading development and Environmental stewardship</i>	Local Government Act	Local Government Authorities	District Commissioner

3.6.2 Relevant Steps for the Issuance of the Environmental License

The current procedure for conducting EIA in Malawi starts with the submission of the outline of the project by the developer to EAD. Then, the EAD confirms whether the project is prescribed or not under the Environmental Management Act, if not, no further action concerning EIA requirements need to be undertaken; if yes, then a Project Brief must be submitted to EAD with the payment of MK 50,000 in concept of review fee.

When the Director of EAD receives the Project Brief, s/he refers it to the Technical Committee on Environment (TCE) established under Section 16 of EMA for its revision. The TCE assess whether the project needs or not the EIA study utilizing the project screening criteria and then recommends the course of action to the Director of EAD. The Director then determines whether or not an EIA is required and informs the developer.

If an EIA is required, then the Terms of Reference (TOR) for the EIA study must be prepared in order to scope the issues to be covered in the Study. This TOR could be prepared by EAD on the basis of the Project Brief presented by the Developer or the Developer can prepare it in consultation with EAD to be presented conjointly with the Project Brief. In the last case, the timing process becomes shorter and EAD only make some few adjustments to approve the TOR.

Once the TOR by EAD is approved, the execution of the EIA Study is started. Public consultation is mandatory during the EIA study implementation. The developer must meet the stakeholders to inform them about the project and to get their views on it.

When the draft EIA report is completed, the proponent must submit it to EAD for review. The review is made through the following mechanism:

- In-house review consists of report analysis by officers of EAD assisted by members of TCE. If the project is complicated and beyond the expertise of the TCE, independent experts are engaged to provide comments based on their area of expertise.
- Public review; it is made for specific projects where the people can access the document and give comments within a period of 14 days.
- If considered necessary, the Director EAD can call for a public hearing on the EIA to solicit direct comments from the people who may be affected by the project.

When the reviews are completed, the developer makes corrections or addition, if any, in the preparation of the draft final report which again is reviewed by TCE until a satisfactory report is produced. TCE may recommend to the Director of EAD to consider sending the report to NCE for their consideration of approval. The result of the review may arrive to the three types of conclusions:

- The project must be redesigned to reduce negative impacts or to enhance positive impacts. The EIA report must be redone
- The project is rejected since it is considered that it will cause significant and irreparable injury to the environment
- The project is approved since it is considered that it will not cause significant injury to the environment. In this case, the Director of EAD issues a certificate and the terms and conditions of the approval upon payment of an EIA fee of 0.003 times the total project cost in MK, but not exceeding 3 million MK. This EIA fee will be used by EAD to monitor the implementation of the environmental management plan of the project presented in the EIA study.

Once the EIA Report is approved by EAD, the developer must seek, depending on the nature of the project, the approval of the project by the other licensing authorities such as the Water Resources Board, the City Councils, etc., as summarized in table 3.1.

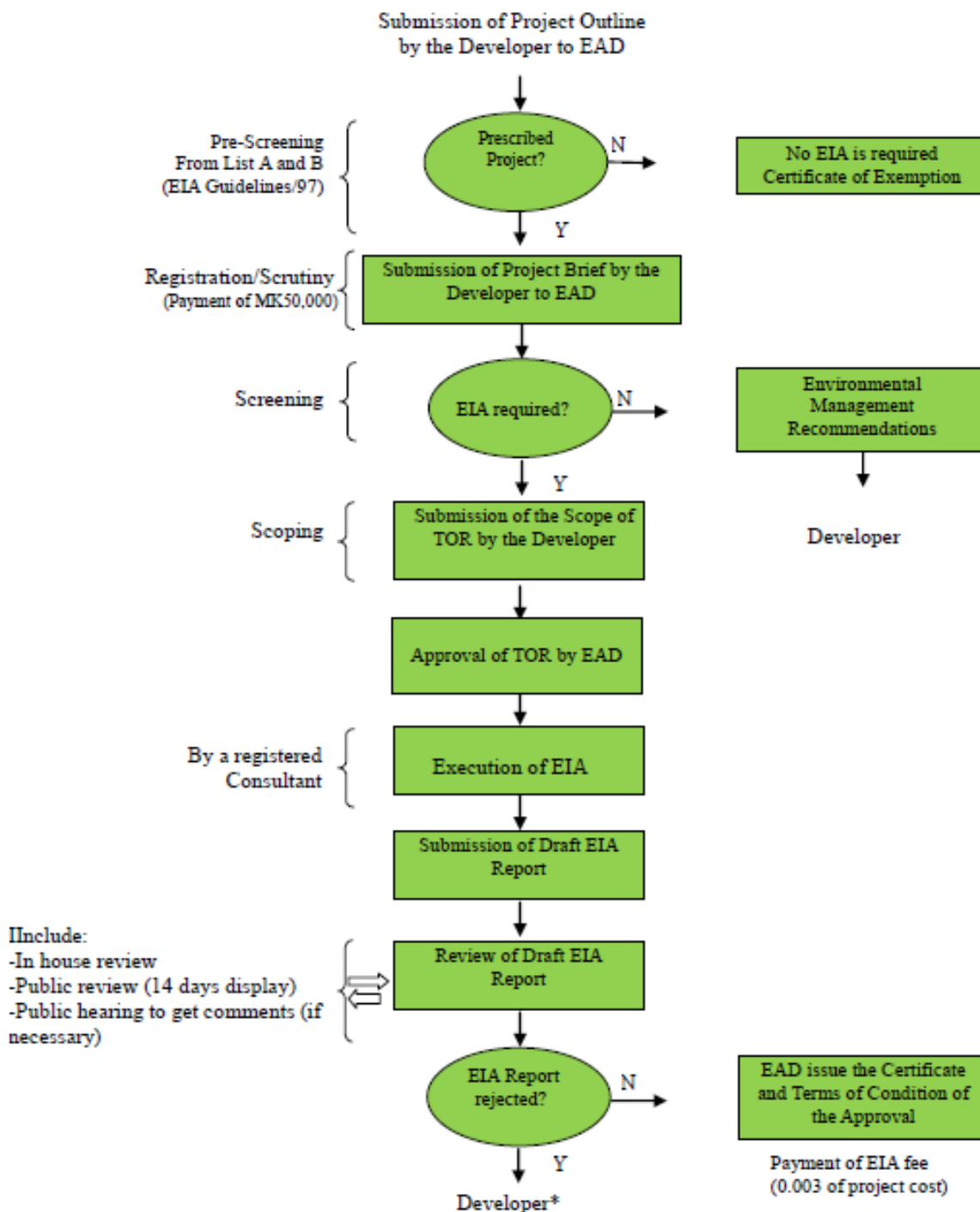


Figure 3-1 Flowchart for EIA Procedure (adapted from GoM, 2014)

3.7 IFAD SOCIAL, ENVIRONMENTAL AND CLIMATE ASSESSMENT PROCEDURES AND POLICIES

TRADE has been designed and informed by IFAD's Climate Change Strategy, Environment and Natural Resources Management (NRM) Policy, Indigenous Peoples Policy, Gender and Targeting Policy and Land Policy. The Programme has also been designed in compliance with IFAD's guidelines on Social, Environmental and Climate Assessment Procedures (SECAP). The following is a summary of the relevant pieces of policies.

IFAD is one of the largest sources of development financing for agriculture and rural development in developing countries. In line with the Sustainable Development Goals (SDGs) and other international relevant agreements IFAD's core mandate is to support the social and economic empowerment of poor rural women and men. As such, it is opposed to any investment that will have a negative impact on its target groups. In respect to the overall goal of

environmental and economic sustainability, IFAD is committed to take a proactive and innovative approach to promote projects and initiatives that are specifically designed to deliver significant environmental, social and climate adaptation and mitigation benefits.

IFAD's Environment and Natural Resource Management Policy notes that value chain projects have the potential to generate positive environmental impacts. Therefore, the value chain approach to development have been promoted in order to enhance environmental and climate resilience in the agriculture and rural development sectors. Investing in value chain development to drive green growth in one of the ten principles of IFAD's Environment and Natural Resource Management Policy (ENRM). A value chain is a vertical alliance of enterprises that collaborate, to a greater or lesser extent, to bring a product from the initial input supply stage, through the various phases of production, processing and distribution, to the final marketing to consumers. The main goal of IFAD's value chain projects is to integrate target groups (small rural producers) into viable value chains to improve their access to secure markets and to raise their incomes sustainably. The main goal of IFAD's value chain projects is to integrate target groups (small rural producers) into viable value chains to improve their access to secure markets and to raise their incomes sustainably. In order to ensure an integrated approach to environmental and social management, the SECAP presents guidance statements.

3.7.1 IFAD's Strategy and Action Plan on Environment and Climate Change 2019-2025:

The speed and intensity of climate change are outpacing the ability of poor rural people and societies to cope. The natural environment and climate change influences the lives of poor rural people in critical ways. Sustained agricultural productivity and economic success depend on reliable access to environmental goods and services, as well as the assets and capacities to withstand environmental and climate hazards and shocks.

IFAD has formulated this strategy in order to address environment and climate change issues across all its policies, strategies and operations, The main objective of the strategy is to enhance the resilience of smallholder farmers and rural communities to environmental degradation and climate change impacts.

Thus IFAD is enhancing its approach to rural development in the context of increasing environmental threats, including climate change. As IFAD will continue to target its investments at the poorer and often most climate-change affected people – whose livelihoods depend largely on agriculture and natural resources – particularly at women as producers and indigenous people as stewards of natural resources, it has put in place measures to address the adversarial climate changes. The Strategy recognises that climate-related risks, and potential opportunities, can be addressed more systematically within the different projects and policy advice. This will be done by being alert to new sources of risk, and exploring more opportunities like rewarding emissions reductions (IFAD, 2018)

3.7.2 IFAD Environment and Natural Resources Management (NRM) Policy

Accelerating environmental degradation is eroding the natural asset base of poor rural people. Environmentally damaging agricultural practices are a major driver of these challenges. The knowledge and technology exist to tackle these challenges and IFAD has years of experience helping poor rural communities manage their natural resources, but it has the potential to do a lot more (IFAD, 2011b).

The goal of the ENRM policy is: "To enable poor rural people to escape from and remain out of poverty through more-productive and resilient livelihoods and ecosystems".

Its purpose is: "To integrate the sustainable management of natural assets across the activities of IFAD and its partners".

The policy sets out 10 core principles to guide IFAD's support for clients in ENRM. The principles include both the core issues to be addressed and suggested approaches (section II.A). In summary, IFAD will promote:

- (1) Scaled-up investment in multiple-benefit approaches for sustainable agricultural intensification;
- (2) Recognition and greater awareness of the economic, social and cultural value of natural assets;
- (3) 'Climate-smart' approaches to rural development;
- (4) Greater attention to risk and resilience in order to manage environment- and natural-resource-related shocks;
- (5) Engagement in value chains to drive green growth;

- (6) Improved governance of natural assets for poor rural people by strengthening land tenure and community-led empowerment;
- (7) Livelihood diversification to reduce vulnerability and build resilience for sustainable natural resource management;
- (8) Equality and empowerment for women and indigenous peoples in managing natural resources;
- (9) Increased access by poor rural communities to environment and climate finance; and
- (10) Environmental commitment through changing its own behaviour.

3.7.3 IFAD Indigenous Peoples' Policy

This Policy on Engagement with Indigenous Peoples aims to enhance IFAD's development effectiveness in its engagement with indigenous peoples' communities in rural areas. It sets out the principles of engagement IFAD will adhere to in its work with indigenous peoples, and the instruments, procedures and resources IFAD will deploy to implement them.

Indigenous people account for an estimated 5 per cent of the world's population, but 15 per cent of those people living in poverty. In many countries, rural poverty is increasingly concentrated in indigenous and tribal communities.

IFAD's Strategic Framework identifies indigenous peoples as an important target group because they face economic, social, political and cultural marginalization in the societies in which they live, resulting in extreme poverty and vulnerability for a disproportionate number of them. To reach them requires tailored approaches that respect their values and build upon their strengths. In its engagement with indigenous peoples, IFAD will be guided by nine fundamental principles: (a) cultural heritage and identity as assets; (b) free, prior and informed consent; (c) community-driven development; (d) land, territories and resources; (e) indigenous peoples' knowledge; (f) environmental issues and climate change; (g) access to markets; (h) empowerment; and (i) gender equality.

The formulation of the ESMF document recognises these principles so that they can be implemented throughout the project cycle.

3.7.4 IFAD Gender and Targeting Policy

Poverty targeting, gender equality and empowerment are cornerstones of IFAD's work to reduce rural poverty and food and nutrition insecurity. This puts people – rural women, men, youth and indigenous peoples – at the centre of IFAD's development projects and policy engagement. This unique approach aims to support the development of inclusive, equitable, sustainable and resilient rural societies and agriculture sectors that are food secure and able to take advantage of the opportunities provided by growing markets, thus providing a springboard to rural transformation. Thus, IFAD has developed a deliberate Policy to address this issue.

3.7.5 IFAD Land Policy

Secure access to productive land is critical to the millions of poor people living in rural areas and depending on agriculture, livestock or forests for their livelihood.

It reduces their vulnerability to hunger and poverty; influences their capacity to invest in their productive activities and in the sustainable management of their resources; enhances their prospects for better livelihoods; and helps them develop more equitable relations with the rest of their society, thus contributing to justice, peace and sustainable development (IFAD, 2008)

The Fund's first strategic objective is to help "ensure that, at the national level, poor rural men and women have better and sustainable access to ... natural resources (land and water), which they are then able to manage efficiently and sustainably." Land access and tenure security issues are linked, directly or indirectly, to all the strategic areas of IFAD's interventions.

The IFAD Policy on Improving Access to Land and Tenure Security has been formulated to: (a) provide a conceptual framework for the relationship between land issues and rural poverty, acknowledging the complexity and dynamics of evolving rural realities; (b) identify the major implications of that relationship for IFAD's strategy and programme development and implementation; (c) articulate guiding principles for mainstreaming land issues in the Fund's main operational instruments and processes; and (d) provide the framework for the subsequent development of operational guidelines and decision tools.

In the policy, land refers to farmland, wetlands, pastures and forests. Land tenure refers to rules and norms and institutions that govern how, when and where people access land or are excluded from such access. Land tenure security refers to enforceable claims on land, with the level of enforcement ranging from national laws to local village rules, which again are supported by national regulatory frameworks. It refers to people's recognized ability to control and manage land – using it and disposing of its products as well as engaging in such transactions as the transferring or leasing of land.

3.7.6 IFAD Guidelines on SECAP

These are Guidelines on Social, Environmental and Climate Assessment Procedures (SECAP). IFAD remains committed to mainstreaming social, environmental and climate change solutions. IFAD's updated Social, Environmental and Climate Assessment Procedures (SECAP) were approved by the Associate Vice-President of IFAD's Programme Management Department in July 2017. This SECAP 2017 Edition provides guiding values and principles, and defines an improved course of action for assessing social, environmental and climate risks to enhance the sustainability of results-based country strategic opportunities programmes (RB-COSOPs), country strategy notes (CSNs), programmes and projects.

This latest Edition is a step forward, making important advances in areas such as risk coverage, social issues, transparency and accountability, and public participation. It also balances monitoring and implementation support with borrower responsibility.

- i. SECAP endeavours to ensure that IFAD's goal of enabling poor rural people to improve their food and nutrition security, increase their incomes and strengthen their resilience, particularly to climate change, is done in an environmentally and socially responsible manner. The procedures set the minimum standards for the assessment of social, environmental and climate change risks of IFAD projects which apply throughout the project cycle. The procedures aim to: "provide information and analysis that strengthen the social, environmental and climate dimensions of projects and programmes;
- ii. maximise social, environmental and climate change adaptation benefits and avoid or minimise negative impacts; and
- iii. increase the consistency, transparency and accountability in decision making concerning these dimensions..."

SECAP provides a step-wise description of the processes to assess risk at each phase of the project or programme cycle, namely: Environmental and Social Categorisation and Criteria, Environmental and Social Impact Assessment (ESIA); Climate Risk Analysis; ESIA Review and Recommendations; Loan Negotiations; Executive Board Approval, Project Supervision and Implementation, and Project Completion and ex-post ESIA.

IFAD carries out an environmental and social screening of sub-projects of each proposed project to determine the appropriate extent and type of Environmental and social Assessment (ESA) to be undertaken and whether or not the project may trigger other policies.

IFAD's environmental and social categorization of projects/programmes comprises the following categories:

- **Category A:** The programme/project may have significant adverse environmental and/or social implications that: (i) are sensitive, irreversible or unprecedented; (ii) affect an area broader than the sites or facilities subject to physical interventions; and (iii) are not readily remedied by preventive actions or mitigation measures.
- **Category B:** The programme/project may have some adverse environmental and/or social impacts on human populations or environmentally significant areas, but the impacts: (i) are less adverse than those for Category A; (ii) are site-specific and non-irreversible in nature; and (iii) can be readily remedied by appropriate preventive actions and/or mitigation measures. While no formal ESIA is required for Category B programmes/projects, in many cases further environmental analysis could be undertaken during project preparation or implementation.
- **Category C:** The programme/project will have negligible or no environmental or social implications – no further environmental analysis is required.

In addition, the environmental and social screening of sub-projects exercise is used to determine the exposure of the programme objectives to climate-related risks (High, Moderate or Low). SECAP provides guidance statements on biodiversity and protected area management; agrochemicals; energy; fisheries and aquaculture; forest resources; water; small dams; physical cultural resources; rural roads; development of value chain, microenterprises and small enterprises; and physical and economic resettlement – most of which are applicable in the context of the TRADE programme. Where resettlement or economic displacement is envisaged, SECAP requires that the principles of “do no harm” and “free, prior and informed consent” are adhered to at all times and for all beneficiaries for any intervention that might affect the land access and user rights of communities.

Included in SECAP are a series of Guidance Statements which are used in guiding the programme in avoiding and mitigating any impacts that may arise due to the project (Appendix 5). These include:

1. Guidance statement 1 – Biodiversity
2. Guidance statement 2 – Agrochemicals
3. Guidance statement 3 – Energy
4. Guidance statement 4 – Fisheries and aquaculture
5. Guidance statement 5 – Forest resources
6. Guidance statement 6 – Rangeland-based livestock production
7. Guidance statement 7 – Water (agricultural and domestic use)
8. Guidance statement 8 – Dams, their safety and SECAP
9. Guidance statement 9 – Physical cultural resources
10. Guidance statement 10 – Rural roads
11. Guidance statement 11 – Development of value chains, microenterprises and small enterprises
12. Guidance statement 12 – Rural finance (under revision)
13. Guidance statement 13 – Physical and economic resettlement (under revision)
14. Guidance statement 14 – Community health

3.7.7 Free, Prior and Informed Consent in IFAD Investment Projects (FPIC)

Free, prior and informed consent (FPIC) is an operational principle empowering local communities to give or withhold their consent to proposed investment and development programmes that may affect their rights, access to lands, territories and resources, and livelihoods (IFAD, 2015). FPIC is solicited through consultations in good faith with the representative institutions endorsed by communities. It ensures that they participate in decision-making processes concerning a given development project.

Consent should be sought in a way that is “free, prior and informed”³:

- **Free** implies no coercion, intimidation or manipulation.
- **Prior** implies that consent has been sought sufficiently in advance of any decision point or commencement of activities.
- **Informed** implies that information provided covers all relevant issues to make decision maker fully enlightened.
- **Consent** is the expected outcome of the consultation, participation and collective decision-making process by the local communities.

i) Where to seek FPIC?

FPIC is not so much a safeguard principle, rather a proactive approach to identify development pathways with local communities and it is applied in two scenarios (IFAD, 2015):

- Investment projects that may have an impact on the land access and use rights of rural communities;
- Projects targeting indigenous peoples or rural areas that are home to indigenous and tribal peoples and ethnic minorities.

³ United Nations Development Group (UNDG), Guidelines on Indigenous Peoples' Issues, 2009:30

The first scenario refers to the type of investment project and the second to the type of project area and target groups. Table 3-2 outlines the FPIC requirement according to these two criteria.

Table 3-2 FPIC requirements based on project type and areas of intervention (IFAD, 2015)

Location	Project likely to affect land access and/or use rights of communities	Agricultural and rural development projects unlikely to affect land rights (agricultural technologies and production, value chain development, social infrastructure)	Project supporting demand-driven services to individuals (rural finance, small and medium-sized enterprise development)
Rural areas without indigenous peoples or minorities.	YES	NO	NO
Rural areas with some indigenous peoples and minorities' communities.	YES	On a case-by-case basis	NO
Indigenous peoples territories or tribal areas	YES	YES	YES

In projects that affect land access and use rights of communities, the principle of FPIC is applied to local communities in a broad sense, i.e. the local communities that will potentially be affected, are identified during project design and in application of SECAP.

However, there is a general requirement for FPIC⁴. in areas that are home to indigenous and tribal peoples and ethnic minorities,

(ii) When to seek FPIC during the project cycle?

FPIC is sought either before project approval (design phase) or during the implementation phase, depending on the nature of the project and at what stage of implementation the specific benefiting communities are identified (IFAD, 2015).

Table 3-3 When to seek FPIC in project cycle, (IFAD, 2015)

WHEN to seek FPIC	Scenarios
During Design Phase	When beneficiary communities are identified at design stage together with the specific investment/activities to be undertaken in each community
During Implementation Phase	When either the communities and/or the specific investment/activities are not identifiable at project design phase

Seeking FPIC at the design phase.

When the precise nature and specific location of an investment is known and well defined, FPIC must be solicited at design stage.

⁴ Consistent with international practice, the IFAD Policy on Engagement with Indigenous Peoples states that they are characterized by: "Priority in time, with respect to occupation and use of a specific territory; the voluntary perpetuation of cultural distinctiveness, which may include the aspects of language, social organization, religion and spiritual values, modes of production, laws and institutions; self-identification, as well as recognition by other groups, or by state authorities, as a distinct collectivity; and an experience of subjugation, marginalization, dispossession, exclusion or discrimination."

Seeking FPIC at the implementation phase. FPIC of investments is sought during the implementation phase when:

- The project, or some of its component, is likely to affect land access and use rights of local communities, and/or
- The project area is home to indigenous and tribal peoples and ethnic minorities;
- Communities are not identifiable at project design stage;
- Specific investments in specific communities are not predefined during project design phase, but open to communities' demand during the project implementation period.

If at design stage the specific locations and communities to be affected were not identifiable, the project documents will include the FPIC implementation plan describing how the participatory and consultation process for seeking communities' consent would be conducted. The FPIC would then be sought during implementation, before a specific investment is decided in a given community.

3.8 INTERNATIONAL AND CONVENTIONS AND TREATIES

Malawi endorses and adheres to a number of internationally acceptable policies, conventions, treaties and protocols in order to augment the national policies and laws. These include;

- The convention of biological diversity
- The convention on international plant protection.
- The convention on wetlands of significant importance.
- The convention on conservation of migratory species of wild animals.
- The convention concerning the protection of world and natural heritage.
- The convention on desertification and drought.
- African convention on conservation of nature and natural resources
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
- The FAO International Undertaking on Plant and Genetic Resources;
- The United Nations Convention on the Law of the Sea;
- The Montreal Protocol for Protection of the Ozone Layer;

3.9 COMPARISON OF MALAWI AND IFAD PROJECT CATEGORISATION

The table below highlights differences and similarities in the requirements for environmental and social assessment, Categorisation as well as resettlement and compensation in the Malawi Legislation and IFAD's SECAP.

It is important to note that the National regulations do not categorise the entire programme but is sub-projects specific.

Table 3-4 Comparison of requirements between IFAD's SECAP and Malawi Environmental Procedures

REQUIREMENT OR CATEGORY	MALAWI ENVIRONMENTAL PROCEDURES	IFAD SECAP AND OTHER POLICIES	COMMENTS
Environmental and Social Screening Category A / Prescribed list A,	<p>Prescribed list A, the project may have significant environmental and social implications that are sensitive, adverse, irreversible or unprecedented and affect an area broader than the sites or facilities subject to physical interventions. The Project may be in:</p> <p>a) a sensitive area (International and domestic sensitive area to be protected)</p> <p>b) an area with potential for re-colonization</p> <p>c) a high-density residential Area (Area where there may be significant adverse impacts to residents)</p> <p>d) a developed area where there may be conflicts between persons who are competing for natural resources</p> <p>e) an area which has drinking water resources.</p> <p>f) an area which has rare natural resources such as water, mineral and medicated plants</p> <p>Relevant Project Type and Scale:</p>	<p>The programme/project may have significant environmental and social implications that are sensitive, adverse, irreversible or unprecedented and affect an area broader than the sites or facilities subject to physical interventions.</p> <p>Relevant Project Type and Scale:</p> <p>Irrigation projects exceeding 100ha</p> <p>SECAP's Guidance Statement #8 on Small Dams categorises dams and reservoirs having a dam wall > 5m or reservoir volumes of > 50 000 m3 as Category A (requiring full ESIA).</p> <p>Requirements:</p> <p>For Category A projects a formal ESIA, RAP and/or IPMP, as applicable, are required with ESMP elaboration.</p>	<p>Relevant difference in reference to Irrigations project exceeding 10ha for Malawi regulations but only exceeding 100ha for IFAD regulations</p>

REQUIREMENT OR CATEGORY	MALAWI ENVIRONMENTAL PROCEDURES	IFAD SECAP AND OTHER POLICIES	COMMENTS
	<p>1. Infrastructure Project</p> <ul style="list-style-type: none"> a) Irrigation projects exceeding 10ha. b) Construction of new section road except in urban area e) Construction of bridge (exceeding 100m) f) Construction of water pipe (exceeding 0.5 m diameter and 10km) g) Construction of dam (exceeding 5ha watering area) h) Construction of drainage (exceeding 1m width and 10km) i) Project with pumping of water from underground (exceeding 500m³/hr or 12,000m³/day) j) Construction of canal connected port <p>2. Project in forest area</p> <p>3. Agricultural projects</p> <p>4. Industrial projects</p> <p>Requirements: Prescribed list A projects require a full EIA subject to review by assessors.</p>		
<p>Environmental and Social Screening</p> <p>Category B / Prescribed list B,</p>	<p>The project may have some environmental and social impacts on human populations or environmentally significant areas but which are site-specific and less adverse than Category A.</p> <p>Requirements: <i>May require an EIA or just a simplified ESIA.</i></p>	<p>The project may have some environmental and social impacts on human populations or environmentally significant areas but which are site-specific and less adverse than Category A.</p> <p>SECAP categorises small scale irrigation projects as Category B, but does not define “small scale” as being below a given area of land to be irrigated. Professional judgement is therefore used to determine the categorisation which can be influenced by proximity to environmentally or ecologically sensitive areas, or other social, cultural or socio-economic considerations</p> <p>SECAP’s Guidance Statement #8 on Small Dams categorises dams and reservoirs having a dam wall ≤ 5m high wall or reservoirs having a volume of ≤ 50 000 m³ as Category B (requiring a Preliminary ESIA or EMP)</p> <p>Requirements: <i>While no formal ESIA is required, environmental analysis will be undertaken in the course of project implementation. This can be in the form of an ESMP which may be a stand-alone document or an output from environmental analysis</i></p>	<p>EIA is not Mandatory but may be required for the Malawi regulation;</p> <p>There will be some need for environmental study during project implementation.</p>
<p>Environmental and Social Screening</p> <p>Category C / Non – Prescribed</p>	<p>Projects which have few or negligible environmental and social implications. There are No irreversible impacts.</p> <p>Requirements: <i>No ESIA is required.</i></p>	<p>The project will have negligible environmental and social implications.</p> <p>Requirements: <i>No further environmental analysis is specifically required.</i></p>	<p>In both regulations there is no demand on ESIA.</p>
<p>Climate Risk Classification</p>	<p>The EIA Guidelines hardly mention climate issues as an aspect to be considered as potentially affecting projects. Although the guidelines do not currently consider Climate Risk in project assessment, with the new change in Government approach to adopt climate change, the Ministry is now placing greater importance on climate change adaptation and resilience, as evidenced by the launching of the National Climate Change Management Policy.</p>	<p>SECAP provides a Climate Risk Classification methodology which specifies that projects that have high vulnerability to climate risk are for example: those that promote agricultural activity on marginal and/or highly degraded areas; projects that establish infrastructure in areas with a track record of extreme weather events; and projects in areas in which rural development projects have experienced weather-related losses and damages in the past. IFAD requires that projects classified as high risk undertake an in-depth climate risk analysis. Examples of medium risk</p>	<p>Climate risk analysis not yet a requirement at National level but it is essential to meet IFAD requirements, and therefore must be conducted.</p>

REQUIREMENT OR CATEGORY	MALAWI ENVIRONMENTAL PROCEDURES	IFAD SECAP AND OTHER POLICIES	COMMENTS
		<p>projects include projects that make use of climate-sensitive resources, but do not focus on these resources as a main commodity (such as irrigation projects); projects which invest in infrastructure not directly exposed to extreme weather events but have potential to become more resilient through adaptation of green technologies; and projects which focus on institutional development and capacity building for rural institutions in climatically heterogeneous areas, where opportunities exist to strengthen indigenous climate risk management capabilities. Low risk projects are those that are not likely to be vulnerable to climate risks (e.g. development of a micro-finance institution). Projects under TRADE are therefore considered to lie within the high and medium climate risk category.</p> <p>Requirement: <i>For High Risk projects such as TRADE, an in-depth analysis of climate risks is required</i></p>	
Public Consultations	The EIA Procedures and Guidelines require consultations with key stakeholders at National, District and local level, as well as with the affected communities, and their participation, during the entire EIA process. The interested and affected groups should participate through consultations, and also in providing inputs and comments throughout the ESIA process.	SECAP emphasises the need for greater consultation by communities (especially the marginalized poor) and stakeholders that are likely to be affected by IFAD's Operations during the respective programme/project cycle, in order to provide input to the project design, receive feedback on the draft ESIA report, ensure broad community support to the project, and to ensure that affected people endorse the proposed mitigation/ risk reduction and management measures. In addition to public consultations, SECAP requires FPIC for all projects that are likely to affect land or user rights to land, whether or not the affected people belong to indigenous groups or minorities.	Both pieces of Legislation emphasise on stakeholder participation throughout the project cycle especially by the PAP.
Public Disclosure	There is no clear-cut stipulated requirement for public disclosure.	IFAD's Policy on the Disclosure of Documents (2010) requires full disclosure to the public, and includes information notes on projects being developed for Board presentation, agreements for approved loans and grants, and project/programme design documents which include ESIA's, ESMFs, RAPs and RAFs.	There is a Gap between the two systems and IFAD's system will be used.
Compensation and Resettlement	<p>Compensation and resettlement are primarily guided by the Land Act.</p> <p>For land to be acquired for public works or for investment, the Law requires compensation to be paid to the land use holder commensurate with the improvements made to the land, or substitute land must be offered.</p>	IFAD's Policy on Improving Access to Land Tenure Security Stresses Free Prior Informed Consent and the "Do no Harm" Principles. These principles are also reflected in other IFAD policies including the Targeting Policy, Engagement with Indigenous Peoples Policy and Gender Equality and Women's Empowerment Policy. The core tenets of IFAD's principles on compensation and resettlement are that wherever possible, any physical or economic resettlement that could negatively impact affected people should be avoided or minimised; that all land and natural resource users with a legitimate claim will be recognised including people having informal/customary rights; and that no affected person should be left worse off, and preferably in a better position through proper and timely compensation and other mitigation measures	Both pieces of Legislation stress on compensation of Project affected people (PAP), But IFAD goes further and stresses that all land and natural resource users with a legitimate claim will be recognised including people having informal/customary rights; and that no affected person should be left worse off,
	No payment for compensation of illegal occupants	Illegal occupants are eligible for compensation	
	Discrepancy in compensation for customary and private land	No discrepancy between customary and private land	
	No consideration during the transition period	PAPs should not be adversely affected during the transition period	

REQUIREMENT OR CATEGORY	MALAWI ENVIRONMENTAL PROCEDURES	IFAD SECAP AND OTHER POLICIES	COMMENTS
	No positive discrimination for vulnerable/disadvantaged groups	Special attention to vulnerable groups in relation to access to socio-economic services	
	Last recourse decision taken by the minister	Availability of judicial recourse	
Grievance Mechanisms	There is no distinct law providing for grievance redress for any complaints that may arise out of non-compliance of environmental or social actions provided in the ESMP.	<p>IFAD has developed a Complaints Procedure for “Alleged Non-Compliance with its Social and Environmental Policies and Mandatory Aspects of Its Social Environmental and Climate Assessment Procedures”. Parties adversely or potentially adversely affected by IFAD-funded projects and programmes may bring issues to the Fund’s attention using SECAPcomplaints@ifad.org</p> <p><i>Any Sexual Exploitation and Abuse (SEA) complaints received shall be directed to IFAD’s Ethics Office</i></p> <p>Complaints must be put forward by at least two people who are both nationals of the country concerned and/or living in the project area. Complaints from foreign locations or anonymous complaints will not be taken into account. Complaints must concern projects/programmes currently under design or implementation. Complaints concerning closed projects, or those that are more than 95 per cent disbursed, will not be considered. IFAD does not provide monetary compensation to resolve complaints. The IFAD website provides a clear summary of the steps involved and guidance on how to report issues</p>	IFAD has an established Grievance redress mechanism (GRM) whilst Malawi does not have a distinct law providing for it.

The Malawian Legislative requirements are generally consistent with IFAD’s procedures. However, there exists a gap regarding:

- i) The screening of a category A / Prescribed list A projects with IFAD being more demanding compared to the Malawi regulations.
- ii) The screening of small-scale sub-projects where the sites and potential adverse localized impacts cannot be identified prior to the appraisal of the project is not provided for in the Malawi legislation.
- iii) Public disclosure of documents. Malawi Government does not emphasise on disclosure as stipulated in SECAP.
- iv) The resettlement and compensation requirements. IFAD includes even informal and customary rights and that no one should be left worse off.
- v) The provision of a grievance redress mechanism (GRM), IFAD has an established mechanism, whilst Malawi does not have a distinct law providing for it.

The above analysis has revealed some gaps between the Malawi Legislation and IFAD Environmental and social Procedures. Where ever there is such a discrepancy the Transforming Agriculture Through Diversification and Entrepreneurship Programme (TRADE) will use the better of the two systems, otherwise the project will use the environmental and social screening process as described in this report.

3.10 ENVIRONMENT AND SOCIAL CATEGORY AND CLIMATE RISK CLASSIFICATION FOR TRADE

i) Environment and Social Category

TRADE is categorised as a ‘A’. The main risks relate to the construction of agro-infrastructure like ware houses and dip tanks, and the rehabilitation works on roads above the length of 10 km.

This Categorisation was arrived at using the IFAD's SECAP requirements. Where a number of sub-projects are involved, IFAD categorisation for the Programme is based on those sub-projects having the highest risk level: in this case the rehabilitation and construction of roads and other agro-infrastructure like warehouses.

The majority of the proposed programme interventions in TRADE will fall under category "B" and are expected to pose medium risks to the environment and social system. These risks will be localised, manageable and/or reversible through recommended mitigation measures. Furthermore, Malawi's national legislations and strategies provide a conducive environment to support the mitigation of potential risks. Site specific ESMPs will be developed (when ever required) for the sub-projects prior to implementation. Any other required interventions will be guided by IFAD's Social, Environmental and Climate Assessment Procedures (SECAP) guidelines and Malawi's legislations and decrees.

Table 3-5 Summary of the Categorization of TRADE Value Chains

VALUE CHAIN	PROJECT CATEGORY AND REASON FOR CATEGORISATION	COMMENTS:
Groundnuts Value Chain: <ul style="list-style-type: none"> • Cultivation processes mostly dry land farming. • Value addition processes like production of Peanut Butter. 	Category B, <ul style="list-style-type: none"> • An increase in the use of agro-chemicals is anticipated. • Land use conflicts should be avoided as more arable land will be required for this activity • Waste generated from the production of Cooking oil, e.g. solid cake and husks, etc. should be handled properly. 	Not much land clearing as cultivation will be done on existing fields.
Soya Beans Value Chain: <ul style="list-style-type: none"> • Cultivation processes mostly dry land farming. • Value addition processes like production of Cooking Oil. 	Category B, <ul style="list-style-type: none"> • An increase in the use of agro-chemicals is anticipated. • Land use conflicts should be avoided as more arable land will be required for this activity • Waste generated from the production of Cooking oil, e.g. solid cake, etc. should be handled properly. 	Land use conflicts may arise from the growing of the traditional crops like maize.
Sunflower Value Chain: <ul style="list-style-type: none"> • Cultivation processes mostly dry land farming. • Value addition processes like production of Cooking Oil. 	Category B, <ul style="list-style-type: none"> • An increase in the use of agro-chemicals is anticipated. • Land use conflicts should be avoided as more arable land will be required for this activity • Waste generated from the production of Cooking oil, e.g. solid cake, etc. should be handled properly. 	Land use conflicts may arise from the growing of the traditional crops like maize.
Irish Potato Value Chain: <ul style="list-style-type: none"> • Cultivation processes mostly dry land farming. • Value addition processes like production of potato Crisps. 	Category B, <ul style="list-style-type: none"> • An increase in the use of agro-chemicals is anticipated. • Land use conflicts should be avoided as more arable land will be required for this activity • Waste generated from the production of Crisps, e.g. potato cuttings, waste cleaning water, etc. should be handled properly. 	Consumption of potatoes is slowly gaining ground and potatoes are becoming a fast-growing cash crop.
Dairy Value Chain: <ul style="list-style-type: none"> ▪ Increase in Khola rearing of cows. ▪ Fetching of fodder/grass for animal feed. ▪ Central collection of milk from various sources. ▪ Construction of Milk Bulking Stations. 	Category A, <ul style="list-style-type: none"> ▪ Impacts from Khola rearing of cows, e.g. cow dung. ▪ Impacts of collecting grass for animal feed. ▪ Health and hygiene associated with collecting milk from various sources. ▪ The Major impact is from the construction of Milk Bulking Stations due to land clearing, brick molding, extraction of sand and quarry stone, etc. 	Fodder is the biggest challenge in this value chain and the farmers may end up engaging in fodder production.
Beef Value Chain: <ul style="list-style-type: none"> ▪ Cattle Markets ▪ Crush Pen ▪ Dip Tanks ▪ Meat Market ▪ Slaughter Houses; ▪ Boreholes 	Category B <ul style="list-style-type: none"> ▪ major issues will be around effluent and solid waste byproducts from slaughter houses, cattle fairs and Crush Pen and dip tanks; and the risk of exposure to drugs and pesticides from Crush Pen and dip tank management. ▪ Another major issue is around the health of workers in slaughter houses (ante mortem inspections, protective clothing and footwear for workers, extensive knowledge of zoonotic diseases). ▪ To remain in Category B: 	Special attention should be given to slaughter houses and Crush Pens which can easily degrade the environment and health of workers and communities

VALUE CHAIN	PROJECT CATEGORY AND REASON FOR CATEGORISATION	COMMENTS:
	<ul style="list-style-type: none"> - <i>Crush Pen capacity should be limited to assist less than 1,000 cows or equivalent in order to prevent major environment impacts.</i> - <i>In relation to the risk of exposure to drugs and pesticides, not more than 500 head of cattle should be handled.</i> - <i>Exploitation of groundwater should not exceed a pumping rate of 500m³/hr.</i> 	
Honey Value Chain: <ul style="list-style-type: none"> • production of bee hives. • Collection of Honey from various sources • Construction of Honey Collection Centers. • Packaging of Honey. 	Category B, <ul style="list-style-type: none"> ▪ Impacts from bee keeping activities in the individual farms. ▪ Health and hygiene associated will collecting honey from various sources. ▪ The Major impact is from the construction of Honey Collection Centers due to land clearing, brick molding, extraction of sand and quarry stone, etc. 	Special attention should be given to conserving vegetation as bees thrive on collecting nectar from flowers.
Cassava Value Chain: <ul style="list-style-type: none"> • Cultivation processes mostly dry land farming. • Cassava processing facilities 	Category B, <ul style="list-style-type: none"> • An increase in the use of agro-chemicals is anticipated. • Land use conflicts should be avoided as more arable land will be required for this activity ▪ <i>Waste management of cassava processing byproducts, i.e., solid waste (fiber) and liquid effluents that may be used as pesticide.</i> 	Special attention should be given to waste management from processing cassava.
Red Sorghum Value Chain: <ul style="list-style-type: none"> • Cultivation processes mostly dry land farming. • Value addition processes like production of flour. 	Category B, <ul style="list-style-type: none"> • An increase in the use of agro-chemicals is anticipated. • Land use conflicts should be avoided as more arable land will be required for this activity • Waste generated from the production of flour, e.g. dust, husks, etc. should be handled properly. 	This will be important in the drier parts of the country.
Goat Value Chain: <ul style="list-style-type: none"> ▪ Goat production; ▪ Goat slaughter houses and conservation facilities (freezing); 	Category B <ul style="list-style-type: none"> ▪ major issues will be around effluent and solid waste byproducts from slaughter houses, and dip tanks; and the risk of exposure to drugs and pesticides from dip tank management. ▪ To remain in Category B: <ul style="list-style-type: none"> - <i>In relation to the risk of exposure to drugs and pesticides, not more than 2,000 small ruminants (goats, sheep) should be handled.</i> - <i>Exploitation of groundwater should not exceed a pumping rate of 500m³/hr at the dip tank sites.</i> 	Based on the site visits, small ruminants are generally in small numbers.
Construction of infrastructure: - This will involve the construction of rural roads, storage facilities such as Ware houses, markets, etc.).	Category A, <ul style="list-style-type: none"> ▪ land clearing for the roads or buildings, ▪ Borrow pits for gravel ▪ Construction of Bridges ▪ brick molding, ▪ extraction of sand and quarry stone, etc. ▪ timber for roofing 	Construction of infrastructure will negatively impact on the environment and should be well managed.

ii) Climate Risk Classification

The climate risk category is **High**. Climate projections indicate an increase in drought conditions, which will exacerbate the on-going degradation processes resulting in increased erosion, as well as, changes in pasture and feed availability for livestock. Malawi has relatively high exposure and vulnerability to climate change, and the intended outcomes have a high risk of being negatively affected by Climate Change. Primary risks relate to increasing temperatures and more erratic rainfall, leading to changes in pasture and feed availability for livestock (beef, dairy and honey value chains). Increasing occurrence of extreme events such as intense rainfall poses an erosion risk to productive lands (beef, dairy and potatoes value chains) and public infrastructure (roads, bridges and market infrastructure). Prolonged dry spells also pose a risk of adversely affecting productivity.

Given the high risk classification for TRADE, a detailed climate risk analysis is being undertaken by the University of Cape Town with resources from the Adaptation for Smallholder Agriculture programme (ASAP 2). The study is assessing the climate risk for select value chains including those identified for TRADE. The study also includes crop suitability mapping and the recommendations will inform the climate fact sheets to be developed under TRADE for each value chain.

3.11 INSTITUTIONAL FRAMEWORK

Relevant Authorities in Malawi

Several institutions, systems and mechanisms exist in the country to achieve a balance in the promotion of sustainable development. These extend to the support and development of agriculture and irrigation. TRADE will rely on the multiple institutional interactions of these players to achieve its goals.

Some of the key institutions and their main roles and responsibilities in relation to environmental protection and the agriculture sector in Malawi are summarised in *Table 3-6*.

Table 3-6 Malawi Institutional Authorities and their Responsibilities

No.	INSTITUTION	ROLES AND RESPONSIBILITIES
1.	Ministry of Agriculture, Irrigation and Water Development – (MAIWD)	<p>Ministry of Agriculture Irrigation and Water Development is the central body of the State that, directs, plans and ensures the implementation of legislation and policies in the field of agriculture, livestock, agricultural hydraulics, agroforestry and food security.</p> <p>Thus, MAFS is the lead institution for agriculture development responsible for formulating and implementing agricultural policies at the national level, including agrarian services, crop development, livestock, irrigation, forestry and food security.</p> <p>The water management infrastructures for the sub-project requirements will be developed in close collaboration with Ministry of Water in terms of:</p> <ul style="list-style-type: none"> • public works, • construction materials; and • water resources management.
2.	, Environmental Affairs Department	<p>EAD is the central government institution that ensures the implementation of the policies on environment and conservation. The relevant mandates of EAD related to TRADE include establishing and implementing guidelines and procedures to environmental licensing of development projects. Thus, the request for environmental licenses should follow guidelines and procedures established by EAD.</p>
3.	Ministry of Lands	<p>In the field of land administration and management; - establish and implement guidelines and procedures for land use administration, inspection and monitoring. This will be relevant for the formal request of the land to implement the sub-project.</p>
4.	Ministry of Public Works, Housing and Water Resources	<p>Ministry of Public Works is the central institution responsible for the implementation and management of activities on public works, construction materials, roads and bridges, urbanization, housing, water resources, water supply and sanitation.</p> <p>For TRADE, the water management infrastructures for irrigation will be developed in close collaboration with MoPHWR in terms of:</p> <ul style="list-style-type: none"> • public works, • construction materials; and • water resources management.
5.	Ministry of Health	<p>The primary objectives of the Ministry of Health (MoH) are to:</p> <ul style="list-style-type: none"> • Promote and encourage the resolution of health problems; • Project and develop programs for promoting and protecting health and prevention and combating disease; • Provide health care to the population through the public health sector; • Promote and support the private, non-profit sector; • Promote, supervise and support a community system for the provision of health care; and • Provide a policy for pharmaceutical formulation and guidance for its implementation. <p>Community health is a priority of the Ministry of Health which has a National Office of Public Health as well as a Department of Community Health in order to develop various programs at the community level including providing better access to health services, community participation, provision of human and financial resources and education/training in preventive and curative care. The primary focus of these programs is around malaria and HIV/AIDS, infant health and malnutrition.</p>
6.	Regional Water Boards	<p>There are three Regional Water Boards whose area of jurisdiction will be traversed by the programme. These include the North, Central and South Water Authorities. They are all responsible for the management of water resources in the programme area, by Providing authorizations related with water uses for the sub-project. Their responsibilities include, among others, analysis of requests for use and benefit of water, discharge of effluent, groundwater and issuing of permits.</p> <p>Some of the specific functions of the Regional Water Boards include:</p> <ul style="list-style-type: none"> • Participation in the preparation, implementation and revision of hydrological occupation plan of hydrological basin;

		<ul style="list-style-type: none"> • Administration and control of water under public domain, create and maintain the Water Cadastre and register private users, as well as inform and collect fees for water utilization; • Licensing and concession of water users, authorize effluent disposal, define administrative reserve areas as well as inspect and monitor accomplishment of the requirements in which these areas where authorized; • Approve hydraulic infrastructure projects, authorize their execution and do inspections;
7.	District Levels	<p>In line with the decentralisation efforts of the Government, the district entities will play an important role in the implementation of TRADE. The Government Ministries described above are also represented in different ways at the district levels.</p> <p>At the district level the various government departments all report to the District Commissioner even though they still belong to the line ministries. the District Commissioner provides assistance in the planning and implementation of all developmental activities at the district levels. Among other aspects they provide extension workers who provide technical assistance to farmers on the ground.</p>

4. DESCRIPTION OF THE SOCIAL AND ENVIRONMENTAL SETTING

4.1 INTRODUCTION

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 of about 2.9% per annum. This imposes ever intensive pressure on the natural resources utilisation, leading to unsustainable land use, depletion of forest resources, and loss of biodiversity, heavy soil erosion and water pollution.

The following paragraphs review some of the key country's social, environmental and natural resources such as demography, economy, nutrition, gender, land ownership, land resources, atmospheric resources, biological resources and water resources as well as the agricultural activities

4.2 SOCIAL CONTEXT

The following is an outline of the social context within which the programme is being designed. It covers the population and economic settings of the country:

4.2.1 Demography

Located in southern Africa, Malawi is landlocked and shares a border with Mozambique, Zambia and Tanzania. Malawi is demarcated into three regions which are Northern, Central and Southern. Lilongwe City in central Malawi is the national and administrative capital. According to National Statistical Office (2019), the last general population census conducted in Malawi was in 2018 of which the total population was estimated at 17.5 million. Females population constitutes 51% of the total and almost 84% of population live in rural communities. The total population increased by 35 percent between 2008 and 2018 representing an intercensal growth rate of 2.9 percent per annum. Table 4-1 below shows population by region. This growth rate is typical of a country with high fertility rate and suggestive of rapid population growth. The census shows that 2.6 million people were aged under-five years, 6.3 million people were aged between 5 and 17 years and about 8.7 million were aged 18 years or more. Malawi is a youthful nation as 51% of its population is below 18 years. The country has a literacy rate of 69% and more literate men (72%) than women (66%). The Northern Region had the highest literacy rate at 79%, then the Central and Southern Regions at 67%.

Table 4-1 Regional Population Statistics

Region	Population	Total %	Sex Ratio (No. of Males /100 females)
Northern	1,679,491	13%	94.8
Central	7,526,160	43%	95.7
Southern	7,750,629	44%	92.6
Malawi	17,563,749	100%	94.2

4.2.2 Economic Status

Malawi remains one of the poorest countries despite making significant economic and structural reforms and sustain economic growth in the past years. The national poverty rate as of 2016 was estimated at 51.5% with life expectancy of 64 years (WHO, 2018). Poverty is driven by poor performance of the agriculture sector, volatile economic growth, population growth, and limited opportunities in non-farm activities. The country's development is guided by the Malawi Growth and Development Strategy (MGDS), a series of five-year plans that contribute to the long-term development goals outlined in Vision 2020. Currently in MGDS III, with the theme "Building a Productive, Competitive and Resilient Nation," will run through 2022 and focuses on education, energy, agriculture, health and tourism.

The economy is heavily dependent on agriculture, which accounts for 80% of the total workforce, 39% of the GDP and 80% of export earnings. However, economic development has been hampered by its landlocked and narrow economic base, limited foreign and domestic investment, high population growth, and low human capacity levels. Due to these constraints, Malawi has tended to be a predominantly import and consumption-based economy (JICA, 2018). Agriculture and Food Security, Irrigation and Water Development and Integrated Rural Development are some of the key priority areas of the Malawi Growth and Development Strategy aimed at achieving sustainable economic growth.

The agriculture sector faces a number of challenges which includes small land holdings, a poorly developed seed sector, weak agricultural extension services, limited access to finance, uncertainty due to climate change, significant policy constraints, and meagre irrigation infrastructure meaning a near-total dependence upon timely and sufficient rains (UASID, 2019). Poverty rates across the country range from 37% to 67%. 11% to 33% of that are categorised as ultra-poor but the remainder are households which are at high risk of slipping into ultra-poor category (IFAD - PRIDE). Most of the farmers are small holder farmers but contribute more than 70% of the nation's agricultural production. The Ministry of Agriculture, Irrigation and Water Development (MoAIWD) has categorised smallholder farmers into three groups as follows:

- (i) *Commercial Farmers*: These are generally male, economically active, hire labour, market-oriented and tend to be the first to adopt new technologies;
- (ii) *Small-Scale Commercial Farmers (SSCFs)*: These usually attain food security, are skilled, and market oriented, but have limited assets. They are easily mobilised into farmers' clubs/groups and able to access services with the aim of farming as a business. When supported technically and financially with loans and access to markets, this group is responsive and facilitates wider spread of Good Agricultural Practices (GAPs).
- (iii) *Smallholder Food Security (SHFS)*: These farmers are productive men and women who have the potential to achieve household food security, but due to limited land and resources find it difficult to produce a surplus. They aim at food security and need technical and financial support in terms of basic inputs such as seed and fertiliser to increase food crop yields. This group constitutes 80% of smallholder farmers.

From the design of TRADE like its predecessors (RLEEP and PRIDE), category two and three will be targeted with the hope of developing the latter into Small-Scale Commercial Farmers.

4.2.3 Nutrition

The Government of Malawi recognises that adequate nutrition is a prerequisite for human growth and development, as it plays an important role in one's physical and intellectual development, and consequentially work productivity. A significant rural population suffer from micronutrient deficiencies, which include anemia, iron, vitamin A and zinc deficiencies (USAID, 2018). The underlying causes of malnutrition include food insecurity, gender inequality, poor hygiene practices and lack of safe water and sanitation. Furthermore, the HIV prevalence rate (11%) has further hindered household food security. UNICEF in 2018 found out that prevalence of stunting among children under 5 years (being too short for one's age) was at 37.1% and underweight at 12%. Prevalence of anaemia and thinness among women of reproductive age (15-49 years) also highly productive was 33% and 7% respectively. NSO (2017) further states that rural children are more likely to be stunted (48 percent) than urban children (41 percent). There is little regional variation, with stunting high in all the regions with Southern at 48%, Central 47% and Northern at 45%. Education and wealth are both inversely related to stunting levels.

4.2.4 Gender Equality and Women's Empowerment

Reducing gender inequality is widely recognised around the world as contributing to agricultural growth and the attainment of food and nutritional security and women's empowerment as a key factor in closing gender gaps in agricultural productivity. In Malawi, the statistics for women are much lower than men on socio-economic indicators including literacy, secondary and tertiary education enrolment and completion, wage equality, political participation, and literacy. As much as the legal framework exists, the response from both government and civil society is still under resourced, uncoordinated and inadequate. According to USAID (2018), women have little control over land even when it belongs to them despite their critical role in food production for their households and the country at large. This lack of control to land and other productive resources is not only a major hindrance to women's empowerment but it makes them vulnerable to poverty.

The National Gender Policy (2012- 17) tries to empower women and girls through addressing several underlying causes such as persistent unequal power relations between men and women, boys and girls due to strong patriarchal attitudes, increasing cases of gender based violence, high HIV/AIDS infection rates especially among women and girls, continued high dropout rates for girls from schools, high poverty levels particularly amongst women, limited participation and representation of women in decision-making processes at all levels, inadequate enforcement of laws, and huge disparities in access and control over resources by the majority of women.

4.2.5 Land Ownership and Usage Rights

Malawi has two customary systems of inheritance, the matrilineal and the patrilineal systems. Under a matrilineal system, women's rights to customary land tend to be primary while under the patrilineal system inheritance of customary land tilts more towards men. Furthermore, according to DfID (2008), there are four main categories of land

ownership which are public land, customary land, leasehold and freehold. Public land is land held in trust by Government, local or Traditional Authorities and is used openly or accessible to the public such as land gazetted for national parks, recreation areas and historical and cultural areas. Customary land is land falling under the jurisdiction of a recognised Traditional Authority, which has been granted to a person under customary law and such land is allocated to the person, resident or immigrant, by the traditional leaders holding jurisdiction over the land. Once customary land has been allocated to the family or lineage under the customary tenure, the land is perceived as the property of the family in perpetuity (Bosworth, 1998). Customary matrilineal and patrilineal land tenure systems however, serve to weaken security of land tenure for some family members especially women and youths as well as obstructing the creation of gender-neutral inheritance of lands. Traditional leaders can and have the powers to allocate land to FBOs to put some infrastructure if they see it fit according to land availability.

Leasehold tenure is a personal contract granting the lessee usage rights. Freehold land accords the holder exclusive possession of the land in perpetuity without term limits placed on the title of the owner.

4.2.5 Women and Land rights

Rights to land through marriage and inheritance are governed by one of two customary systems in Malawi. Under the matrilineal system prevalent in the central and southern regions of the country, land is handed down through the female line, while under the patrilineal system in the northern region, land is transferred from fathers to sons. However, in both matrilineal and patrilineal systems of marriage women have few or no independent rights to land property due to the mixture of traditional customs and market economics. Under the patrilineal system, if a woman gets divorced or widowed, she risks losing her land usage rights to her husband's relatives. Even under matrilineal systems who are commonly thought to enjoy land rights, decision-making power on land ownership usually lies with male clan leaders who decide who gets a piece of land. Malawi's 2002 National Land Policy recognizes the importance of tenure security for all citizens and a 2016 bill recognizes women's customary land rights - the rights of communities to ancestral land. Nevertheless, there are still gaps and lags in the institutions responsible for assigning women property and inheritance rights. The laws that underpin the property rights of women may be difficult to enforce because they go against the grain of cultural norms and practice (Joireman, 2008). This raises a hideous spectre of gender inequality in matters of land ownership and inheritance which is exacerbated by low literacy levels among women. If women get equal opportunities to own land as their male counterparts, they can play a pivotal role towards food security as they will be able to access credit, farm inputs, and get to decide how to use their land and benefits thereof.

4.2.5 Youth and Agriculture

Empowering youth to engage in the agricultural sector is vital to creating livelihood opportunities, achieve food security and stimulate economic growth in the country. White (2012) observes that it was not easy for youth to access land, even though they might be interested in agriculture. The majority of young people are faced by the narrowing and sometimes complete closure to access land. Malawi's average land holding size per household is 1.2 hectares and the average land per capita is 0.33, reflecting wide land inequality. Amidst land pressure facing many families, it is not easy for youths to get their own pieces of land as the transaction will have to be approved by the traditional leader (chief) who may have a different opinion. The chief may eventually turn down the decision taken by the family. Even in the event that they finally get the land, the young farmer will be let down by lack of capital, efficient technology and skills, access to extension services, favourable infrastructure and viable markets for their products.

4.2.6 Archaeology and Sacred Places

i) Chongoni rock art area

The Chongoni Rock Art Area is located in the Central Region of Malawi consisting of 127 sites and possibly more. These sites have art depictions of rock art and paintings from the Later Stone Age and Iron Age. The 127 sites of this area feature the richest concentration of rock art in Central Africa. They reflect the comparatively scarce tradition of farmer rock art, as well as paintings by BaTwa hunter-gatherers who inhabited the area from the late Stone Age. The Chewa agriculturalists, whose ancestors lived there from the late Iron Age, practiced rock painting until well into the 20th century. The symbols in the rock art, which are strongly associated with women, still have cultural relevance amongst the Chewa, and the sites are actively associated with ceremonies and rituals. The area was inscribed as a UNESCO World Heritage Site in 2006 (Martin Gray, 1982-2019)



Figure 4-1 Mphunzi rock painting site

ii) Mbande Hill

Mbande Hill is a Malawian archaeological site, located at the northern end of Lake Malawi, in Karonga district, Northern Malawi. The site has been identified as the capital of the Ngonde kingdom. Its chiefs, known as the 'Kyungu' ruled from this location. Pottery and bead finds at the site suggest it was occupied between 1500–1800 period, while the uppermost levels of excavation point to a nineteenth-century date. It is suspected that the kingdom had links with Africa's East Coast maritime trade networks. A surviving earthwork at Mbande Hill may have been part of the fortifications (UNESCO, 2019).

iii) Khulubvi Sacred Shrine

Khulubvi sacred shrine is located in Nsanje District, in the lower Shire Valley in Southern Region of Malawi. It is an important spiritual place among the people of Mang'anja tribe. It is a place where the Mang'anja worship the spirit of Mbona. According to Mang'anja oral tradition, Mbona was a legendary figure with super human powers who lived in the area during the rise of the Lundu Kingdom. Mbona is said to have had magic powers of bringing rain, creating wells of water on sandy lands, creating forests where they did not exist and hiding from enemies by turning into other creatures such as guinea fowls. From this site, other sacred sites sprouted where people gather to worship the spirit of Mbona. These include Nyandzikwi sacred site on the junction of Bangula and Maraka road in group village headman Lundu in Nsanje District. Another sacred site is Mwala U111odzi shrine which is located near Mgwiriza Village within Thangadzi River course in the same area (Wikipedia, 2019).

4.3 CONDITIONS OF NATURAL RESOURCES IN MALAWI.

4.3.1 Geomorphology.



Figure 4-2 Physical Features of Malawi
(<https://www.freeworldmaps.net/africa/malawi/map.html>, 2019)

Malawi is a landlocked country in southeast Africa, which lies wholly within the tropics, between latitudes 9° and 18°S, and longitudes 32° and 36°E. It occupies a thin strip of land between Zambia and Mozambique protruding southwards into Mozambique along the valley of the Shire River. In the north and north east it also shares a border with Tanzania.

The Great Rift Valley runs through the country from north to south, and to the east of the valley lies Lake Malawi making up over three-quarters of Malawi's eastern boundary. The Shire River flows from the south end of the lake and joins the Zambezi River farther south in Mozambique⁵.

Mountainous sections surround the Rift Valley and to the south of Lake Malawi lie the Shire Highlands. In this area, the Zomba and Mulanje mountain peaks rise to respective heights of 2,134 and 3,048m.

The Great Rift Valley traverses the country from north to south. In this deep trough lies Lake Malawi (also called Lake Nyasa), the third-largest lake in Africa, (587km long and 84km wide) comprising about 25% of Malawi's area. The surface of Lake Malawi is located at 457m above sea level, with a maximum depth of 701m, which means the lake bottom is over 213m below sea level at some points. The Shire River flows from the south end of the lake and joins the Zambezi River 400 kilometers south in Mozambique.

⁵ https://en.wikipedia.org/wiki/Geography_of_Malawi, July 2019.

West of the Great Rift Valley, the land forms high plateaus, generally rising 914 to 1,219m above sea level. In the north, the Nyika Uplands rise as high as 2,438m.

South of the lake lies the Shire Highlands, with an elevation of 600–1,600 meters, rising to elevations of 2,130 and 3,002 meters at the Zomba Plateau and Mulanje Massif respectively. In the extreme south, the elevation is only 60–90 meters above sea level.

4.3.2 Geology.

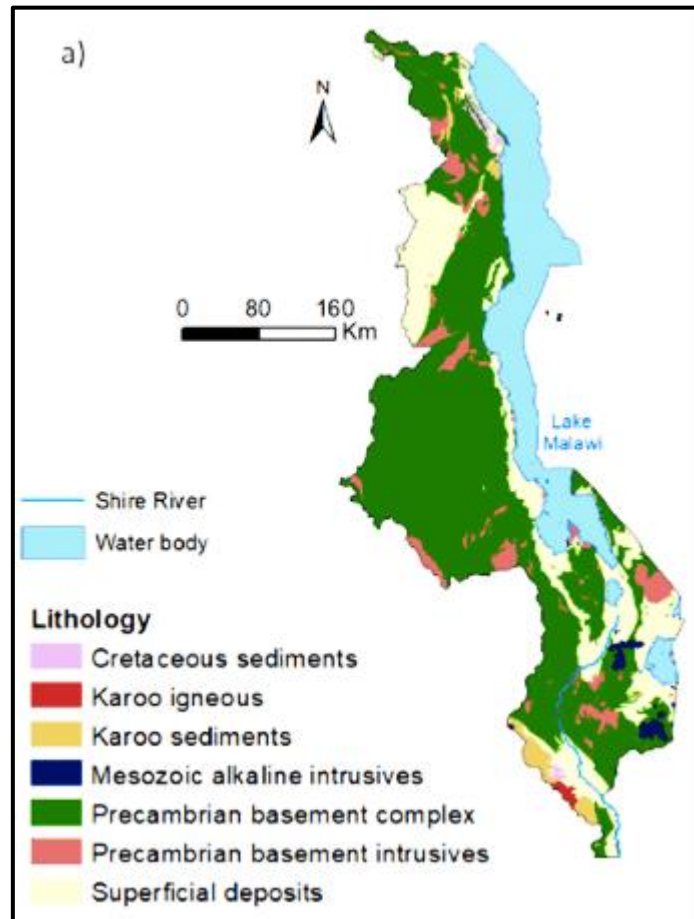


Figure 4-3 The Geological Formations of Malawi
(Adapted from Ó Dochartaigh, et al 2018.)

Most of the country is underlain by Precambrian to Lower Palaeozoic crystalline basement rocks. These are unconformably overlain in places, particularly in the north and south, by more recent sedimentary rocks or volcanic rocks. There is extensive Quaternary alluvium in valley bottoms and the rift floor plain (Ó Dochartaigh, et al 2018).

The main structural feature is the rift valley, which was formed by a subsidence fault during the Upper Mesozoic and Cenozoic, and is still active. Lake Malawi and the Shire Valley lie on the floor of the rift valley (UN 1989). Table 4-2 is an outline of the geology of Malawi.

Table 4-2 Geological Environments of Malawi

KEY FORMATIONS	PERIOD	LITHOLOGY	STRUCTURE
Unconsolidated			
Alluvial and lacustrine deposits	Quaternary	Clays, silts, sands and occasionally gravels, deposited in the floor of the rift valley, and along the lakes in the major valley floors (UN 1989). The lithology of the deposits is highly variable. They occur particularly in several basins along the rift valley shore, including at Karonga and Salima-Nkhotajota lakeshores and the in upper and lower Shire Valley (Chavula 2012). They vary in thickness along Lake Malawi, tending to increase closer to the lake shore to a maximum of 60 m. In the centre of the Shire Valley, alluvium is 40 to 80 m thick, and reaches 150 m thick in the lower Shire Valley (UN 1989).	The alluvial deposits are faulted, caused by ongoing subsidence of the rift valley.
Cretaceous to Quaternary sedimentary rocks			
Sungwa, Chiwondo, Chitembe, Dinosauric and Lupata	Cretaceous to Quaternary	These sedimentary rocks are found in small, narrow, elongated basins in the north of the country, running parallel to the shores of Lake Malawi. They include loosely consolidated sandstones and unconsolidated sands, sandy marls, clays and conglomerates, but are dominated by aeolian desert sandstones, with abundant evaporite deposits in a limestone matrix (UN 1989).	
Igneous			
Intrusive plutonic rocks	Jurassic	These occur in the Chilwa region in the south, and comprise granitic and syenitic plutonic rocks.	
Stormberg volcanic rocks	Jurassic	A series of basaltic lava flows, interbedded with layers of sandstone and tuff (UN 1989).	
Karoo			
Karoo sedimentary series	Permian-Triassic	Karoo sedimentary rocks crop out in the north of Malawi, in north-south trending basins, and also to the southwest of the Shire Valley. They lie unconformably on crystalline basement. The base of the sedimentary sequence comprises conglomerates, sandstones, argillaceous rocks and coal seams; at the top of the sequence are arkosic sandstones, marls and more argillaceous rocks. The rocks are largely well cemented by calcite. They can be over 3500 m thick (UN 1989).	
Basement Complex			
Crystalline Basement	Precambrian to Lower Palaeozoic	Dominantly gneiss and granulite; also, some metamorphic schists, quartzites and marbles (UN 1989). The Mafinga and Mchinjin groups in the north and east comprise mainly unmetamorphosed sandstones and conglomerates. Across the whole basement complex are outcrops of intrusive igneous rocks, such as the Nyika and Dzanalyama granites, syenites, and pegmatite and dolerite dykes (UN 1989).	

4.3.3 Hydrogeology

Groundwater is the main domestic water source for the rural population, and used for irrigation by small scale subsistence farmers. Large scale irrigation schemes all rely on surface water. Groundwater development is being restricted by a general lack of hydrogeological information. Figure 4-4 shows the country's Hydro-geological formations whose potential is explored in table 4-3 below (Ó Dochartaigh, et al 2018).

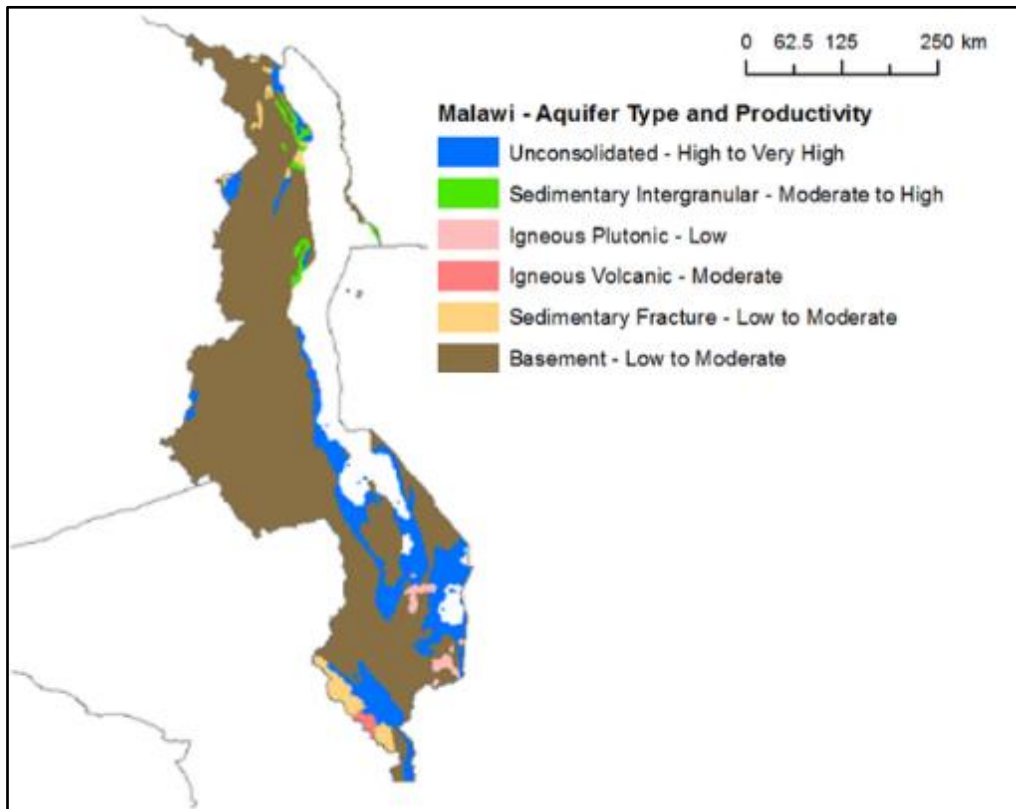


Figure 4-4 Malawi Hydrogeological Formation
(Adapted from Ó Dochartaigh, et al 2018.)

The two most important aquifer systems in Malawi are (Chavula 2012):

- unconsolidated alluvium in the major valleys and lake shore plains, which forms a high yielding aquifer in many areas; and
- crystalline basement rocks, which cover much of the country, and form a low yielding aquifer.

There are only small occurrences of other rock types. Although these can be important locally, relatively little is known of their hydrogeological properties.

Table 4-3 Ground water potential for the Hydro-geological formations

Named Aquifers	General Description	Water quantity issues	Water quality issues	Recharge
Unconsolidated				
Alluvial and lacustrine deposits	Alluvial and lacustrine deposits can form highly productive aquifers where they are better sorted and dominated by coarse grained sediment - sand and, sometimes, gravel - and where they are thick enough. The aquifer tends to be unconfined. Groundwater can be in hydraulic continuity with adjacent rivers or lakes. Water	High to very high yields. Studies show that the average borehole yield from alluvial aquifers in Malawi is 15 l/s (litres/second); hydraulic conductivity ranges from 1 to 10 m/d; transmissivity ranges from 50 to 300 m ² /day; and storage coefficient ranges from 1 x 10 ⁻² to 5 x 10 ⁻² , and	Groundwater in alluvial aquifers is typically more mineralised than in basement aquifers. In some cases salinity levels are too high for potable water, such as in the lower Shire Valley and the eastern part of the Bwanje Valley (Chavula 2012). Chloride concentrations of up to 4000 mg/l and sodium concentrations up to 3600 mg/l have been	Recharge occurs from direct rainfall infiltration and, where the aquifers are in hydraulic contact with rivers or lake water, by losses from surface water. Studies estimate recharge to the eastern side of the lower Shire Valley alluvial aquifer at more than 200 mm/year

Named Aquifers	General Description	Water quantity issues	Water quality issues	Recharge
	table depth is typically between 5 m and 10 m below the ground surface (Chavula 2012).	average borehole depth is 60 m (Chavula 2012).	recorded (Bath 1980). Groundwater salinity appears to be linked to the dissolution of evaporate minerals and/or evaporative concentration (BGS 2004). High fluoride concentrations of 2 to 20 mg/l have been found in some parts of the alluvial aquifers (Bath 1980). High iron concentrations of up to 80 mg/l and more are common (BGS 2004).	(Chavula 2012).
Sedimentary - Intergranular Flow				
Cretaceous to Quaternary sedimentary rocks	These rocks are likely to have relatively high porosity and intergranular permeability. They may form moderate to highly productive local aquifers.	Variably productive aquifers, depending on lithology, from moderately productive (borehole yields 75 to 250 m ³ /d) to productive (borehole yields 250 to 1250 m ³ /d). In formations with limestones the permeability can be high, but variable, resulting in highly productive boreholes yielding more than 1250 m ³ /d), in formations with fine grained sediments, permeability is typically very low and groundwater occurrence is limited (borehole yields less than 75 m ³ /d).		Recharge occurs from direct rainfall infiltration and, where the aquifers are in hydraulic contact with rivers or lake water, by losses from surface water
Igneous Volcanic				
Stormberg volcanic rocks	The most porous and permeable parts are in the weathered zones of contact between lava flows. These may form moderate productivity local aquifers.	<ul style="list-style-type: none"> • Form typically local, small and dispersed aquifers, with limited productivity and without significant groundwater resources • Typical borehole yields are less than 25 m³/d. • Where there is a well-developed, permeable weathered zone, yields from this zone can be higher, but typically not more than 75 m³/d. • Intergranular permeability is very low to zero. • Borehole depths typically vary between 30 and 100 m 	The Water quality is usually good.	Recharge occurs from direct rainfall infiltration and, where the aquifers are in hydraulic contact with rivers or lake water, by losses from surface water
Igneous Intrusive				
Plutonic intrusions of granite and syenites in the Chilwa province	Likely to have very low groundwater potential.			Recharge occurs from direct rainfall infiltration and, where the aquifers are in hydraulic contact with rivers or lake water, by losses from surface water
Sedimentary - Fracture Flow				
Karoo	The rocks of the Karoo are			Recharge occurs from

Named Aquifers	General Description	Water quantity issues	Water quality issues	Recharge
sedimentary sequence	generally well-cemented with low porosity and intergranular permeability. Groundwater storage and flow occurs largely in fractures in the rocks. Groundwater levels are typically 20 m to 30 m below ground surface (UN 1989). These rocks may form a low to moderate productivity local aquifer.			direct rainfall infiltration and, where the aquifers are in hydraulic contact with rivers or lake water, by losses from surface water
Basement				
	<p>The basement complex rocks have virtually no primary (intergranular) permeability, but can form an aquifer where they have been sufficiently weathered <i>in-situ</i>, to form a layer of unconsolidated saprolitic weathered material. This weathered zone is best developed in the plateau areas, where it is often 15 m to 30 m thick, and locally even thicker (Chavula 2012). The best development of weathered saprolite tends to be associated with fractures, often along fracture zones.</p> <p>The aquifer is usually unconfined. The depth to water table is typically between 15 m and 25 m below the ground surface (Chavula 2012). The average borehole yield is 1 to 2 l/s. Hydraulic conductivity ranges from 0.5 to 1.5 m/d. Transmissivity ranges from 5 to 35 m²/day. Storage coefficient ranges from 1 x 10⁻² to 5 x 10⁻². Boreholes tend to be 45 to 50 m deep (Chavula 2012).</p>	<ul style="list-style-type: none"> poorly developed weathered mantle (generally less than 20 m) and thus limited groundwater storage. Secondary permeability and exhibiting low transmittivities. The average depth to the water table is 10 - 20 meters with an average specific capacity of 10 - 100 m³/d/m and a yield range of 100 – 250 m³/d. Positive exceptions can be found in fractured fault zones, valleys filled with unconsolidated alluvium, or where the weathered mantle is particularly thick (20 to 50 m), where borehole yields can be above 125 m³/d. 	Groundwater is typically of good quality, with slightly acidic to neutral pH (~6.4 to 7.0). Total dissolved solids (TDS) are usually less than 1000 mg/l, and typically around 350 mg/l (Chavula 2012), but occasionally there is elevated salinity, sometimes linked to high sulphate concentrations and in others possibly linked to the dissolution of evaporate minerals (BGS 2004). Fluoride concentrations are typically relatively low, less than 1 mg/l (BGS 2004).	Recharge occurs from direct rainfall infiltration and, where the aquifers are in hydraulic contact with rivers or lake water, by losses from surface water

4.3.4 Soils

Soil compositions tend to be closely related to the underlying geology. Sandy soils occur on many granitic areas of the basement complex, and at the edges of alluvial plains. Latosols, including ferrosols, are common. Many soils are lateritic, typically 1 to 3 m thick (Smith-Carington and Chilton 1983), and sometimes 5 to 20 m thick (BGS 2004). Other soils include lithosols on steep slopes of the uplands and rift valley escarpment; hydromorphic (water logged) soils, including vertisols, in dambos; and calcimorphic soils on alluvial plains (Smith-Carington and Chilton 1983).

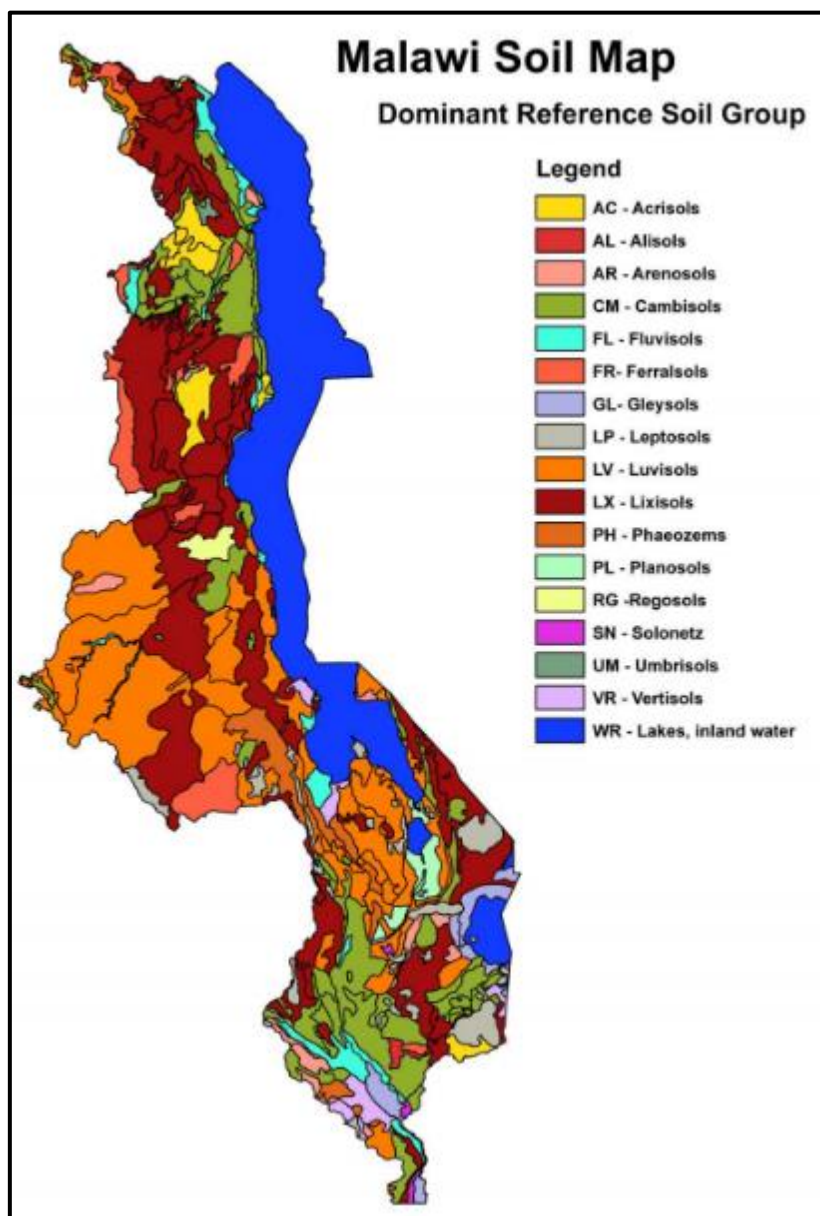


Figure 4-5 Soil Map of Malawi (Leenaars J., (2018)

(c) **Main soil types.**

The country has four main soil classes, namely:

- (i) **Latosols:** these are red -yellow soils which include the ferruginous soils of Lilongwe -Kasungu plains, West Mzimba Plains, and some parts of Southern region. These are among the best agricultural soils in the country. The weathered ferrallitic soils, some with a high lateritic content can be easily exhausted. Ferrallitic soils cover large parts of the plains along the western border of the country.
- (ii) **Lithosols.** Lithosols are the shallow stony soils that associate with deep slopes. These occur in areas of broken relief in the country. Examples are found in highlands of Viphya Plateau, Nyika Plateau, Dedza Escarpment, Dzalanyama Range and Kirk Range.
- (iii) **Calcimorphic soils.** This group includes the alluvial soils of the lacustrine and riverine plains, the vertisols of the lower Shire River Valley, the Phalombe –Lake Chilwa Plains, the mopanosols of Liwonde, Balaka, and Bwanje Valley.
- (iv) **Hydromorphic soils.** These are grey soils of the hydromorphic group which are found either in seasonally or permanently wet areas, as in Lake Chilwa Plain, Lower Shire Valley, and other localised marshy areas known as dambos.

The soils of much interest in this programme are calcimorphic and hydromorphic soils. These soils occur in low-lying areas including flood plains and riverines which are the potential agricultural areas which are under consideration in this environmental and social management framework.

4.3.5 Climate and Rainfall

Malawi 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.

i) Average Annual Rainfall

Ninety five percent (95%) of the annual precipitation takes place in the warm-wet season. Figure 4-6 depicts the average annual rainfall. Topography and proximity to the lake influence its distribution. Annual average rainfall varies from 725mm to 2,500mm with Lilongwe having an average of 900mm, Blantyre 1,127mm, Mzuzu 1,289mm and Zomba 1,433mm. Least rainfall (about 700-800 millimetres 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 millimetres) 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 (1400-1900 millimetres per year) is experienced in high plateau areas such as Mulanje Mountains, Zomba highlands, Viphya and Nyika Highlands.

Extreme conditions include the drought that occurred in 1991/92 season and floods of 1988/89 season. The low-lying areas such as Lower Shire Valley and some localities in Salima and Karonga are more vulnerable to floods than higher grounds.

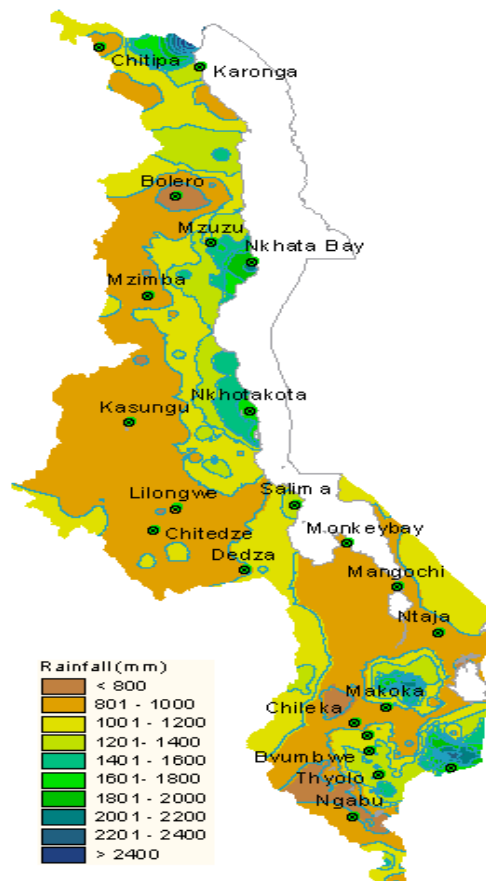


Figure 4-6 Average annual rainfall Map for Malawi

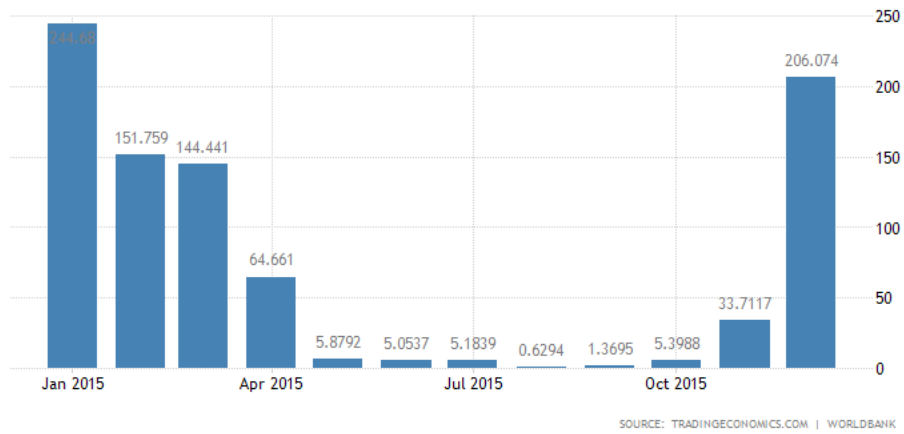


Figure 4-7 Average Rainfall Distribution for Malawi

ii) Temperature – long term averages

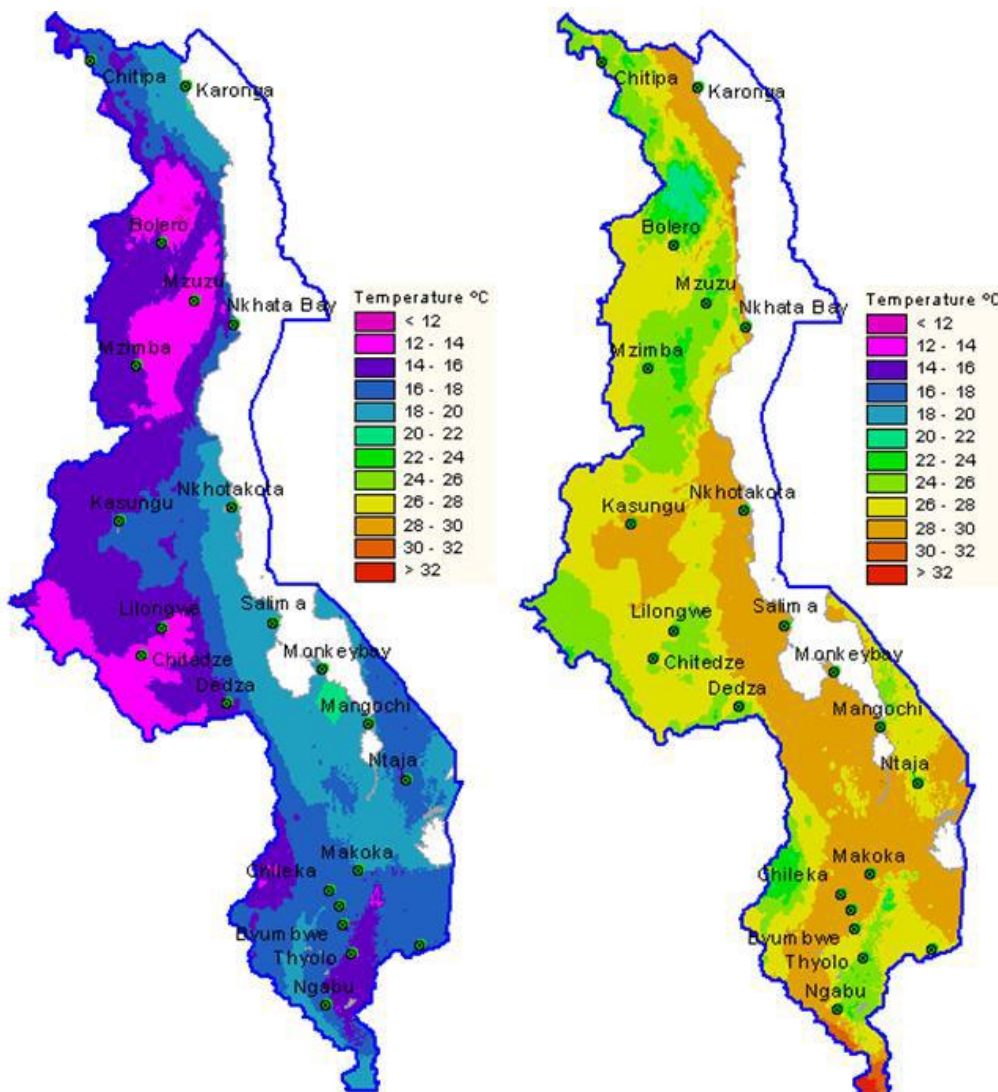


Figure 4-8 Average minimum temperature and maximum temperature across Malawi (source: www.metmalawi.com, accessed 10th April 2014)

A cool, dry winter season is evident from May to August with mean temperatures varying between 17 and 27 degrees Celsius, with temperatures falling between 4 and 10 degrees Celsius (Figure 4-7). In addition, frost may occur in

isolated areas in June and July. A hot, dry season lasts from September to October with average temperatures varying between 25 and 37 degrees Celsius. Humidity ranges from 50% to 87% for the drier months of September/October and wetter months of January/February respectively.

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.

4.3.6 Climatic Change and Variability

The Intergovernmental Panel on Climate Change (IPCC) has demonstrated unequivocal evidences of climate change worldwide. Malawi is one of the most vulnerable countries to the impacts of climate change.

According to McSweeney et al, 2010, average annual temperature has increased by 0.9°C from 1960 to 2006. Warming has been more rapid in summer. The frequency of hot days and hot nights in all seasons has increased significantly with the average number of hot days and nights per annum having increased by 30 and 41 respectively from 1960 to 2003. Year to year variability in rainfall is quite strong in Malawi and so there are no significantly discernible trends in rainfall patterns (McSweeney et al, 2010).

The World Bank climate profile of Malawi states that Malawi is particularly prone to adverse climate hazards including dry spells, seasonal droughts, intense rainfall, ravine floods and flash floods. Droughts and floods have increased in frequency, intensity and magnitude over the past twenty years. They identify floods and droughts as the leading cause of chronic food insecurity which is endemic in many parts of the country. The World Bank refers to estimates that droughts, on average, cause GDP losses of almost 1% every year with much greater losses for extreme droughts (World Bank, 2014).

Malawi is among the countries most prone to the adverse effects of climate change ranked among 16 countries of 'extreme risks' to climate change impacts in the world (Maplecroft, 2012). The Fifth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC) notes that climate change is beginning to impact freshwater ecosystems with elevated surface water temperatures evident in Lake Malawi.

Living with the effects of climate change, as imposed in the foreseeable future, calls for adaptation and mitigation measures to offset or reduce such effects. Because of the recurrences of these natural disasters, Malawi has gathered significant data to allow the country to knowledgeably tackle recurrent natural disasters, including developing adaptation in terms of finding ways of developing economic and social activities under conditions caused by climate change and preventing and mitigating negative impacts on socioeconomic activities. All TRADE sub-projects will be expected to effectively use this knowledge base to increase their resilience to this phenomenon. The sub-projects should be able to operate under the conditions caused by the disasters.

Notwithstanding its very low emissions of around 1.4 t CO₂e per capita in 2015, Malawi as a Party to the United Nations Framework Convention on Climate Change (UNFCCC) has made firm decisions and plans to move the country's development pathways towards a green economy based on national circumstances and capabilities. It is in light of the above that the country's Intended Nationally Determined Contribution (INDC) has been developed. The INDC aims at achieving the objective of the UNFCCC as set out in Article 2 of the Convention and also contribute to sustainable development.

At national level Malawi has developed the country's Intended Nationally Determined Contribution (INDC) (INDC 2015). Although Malawi has very low emissions of around 1.4 t CO₂e per capita (in 2015), it has made firm decisions and plans to move the country's development pathways towards a green economy based on national circumstances and capabilities.

The priority sectors and thematic areas identified based on national development priorities are: agriculture (crops, livestock, fisheries), water resources, health, infrastructure, land-use planning, transport, population and human settlements, disaster risk management, forestry; wildlife, energy and gender. For all these sectors, there will be need for multi-sectoral collaboration in the implementation of various projects and programmes to take serious cognisance of

disaster risk management in view of Climate change and variability. In this view TRADE should be geared to also address Climate change and variability issues

4.3.7 Water Resources

Malawi water resources are in two main categories namely: surface and ground water resources. Surface water resources are derived from precipitation. The rich surface water resources comprise a network of rivers and lakes that count for about 20% of the country's area. The drainage system is divided into 17 water resources areas. 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. Other extensive surface water bodies include Lakes Chilwa, Malombe, and Chiuta. And other important rivers are North Rukuru, South Rukuru, Lintwhite, Lilongwe, Ruo, Dwangwa, Bua, Phalombe and Mwanza. The 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. Few areas have hard water. 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 millimetres 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 contains some of the worlds' important wetland ecosystems. The most important wetlands include the shorelines plains of Lakes Malawi, 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 forms some sheltered fish spawning, nursery grounds and as habitat for adult fish. The biological diversity of wetlands and other water resources have been negatively affected by high population pressure and over exploitation.

4.3.8 Land Resources

Malawi can be 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 is land. 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 4-4 An overview of Land Availability in Malawi

Source: Malawi National Land Policy, 2002, pg 7

ISSUE	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

(a) **Land availability and agriculture.**

Malawi covers an area of about 11.8 million hectares of which 9.4 million is land and the remaining 2 million is under water bodies. 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:

Based on recent survey by Malawi Government's National Statistics Office, 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\$140 per capita income annually.

(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 recognised 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. Therefore, there is no incentive for owners to invest into long term conservation of the land. A coherent system in the distribution of land exists in both patrilineal and matrilineal societies. This system has allowed smallholder agriculture to survive without access to bank loans.

(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 year 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) **Registered Land**

This is grouped into two classes called customary registered and adjudicated land. The first exists in Lilongwe District only. This land is registered in the family leader name with all family names in that area registered including the size of their land holdings. Their implicit freehold status as the families can trade in its holding by leasing out or selling bits of it with groups consent. Loans can therefore be obtained on strength of their certificates to the land.

The second class is a simplified leasehold system, which allows owners to have certificates for their pieces of land based on survey and registration number. This is common in the urban areas, but has been applied in rural areas for agricultural, commercial and residential uses. In case the government decides to transfer the existing irrigation schemes to farmer groups, leasehold system would be an option for transferring the schemes.

(iv) **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**

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

(vi) **Public Land**

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

4.3.10 Agro-Ecological Conditions.

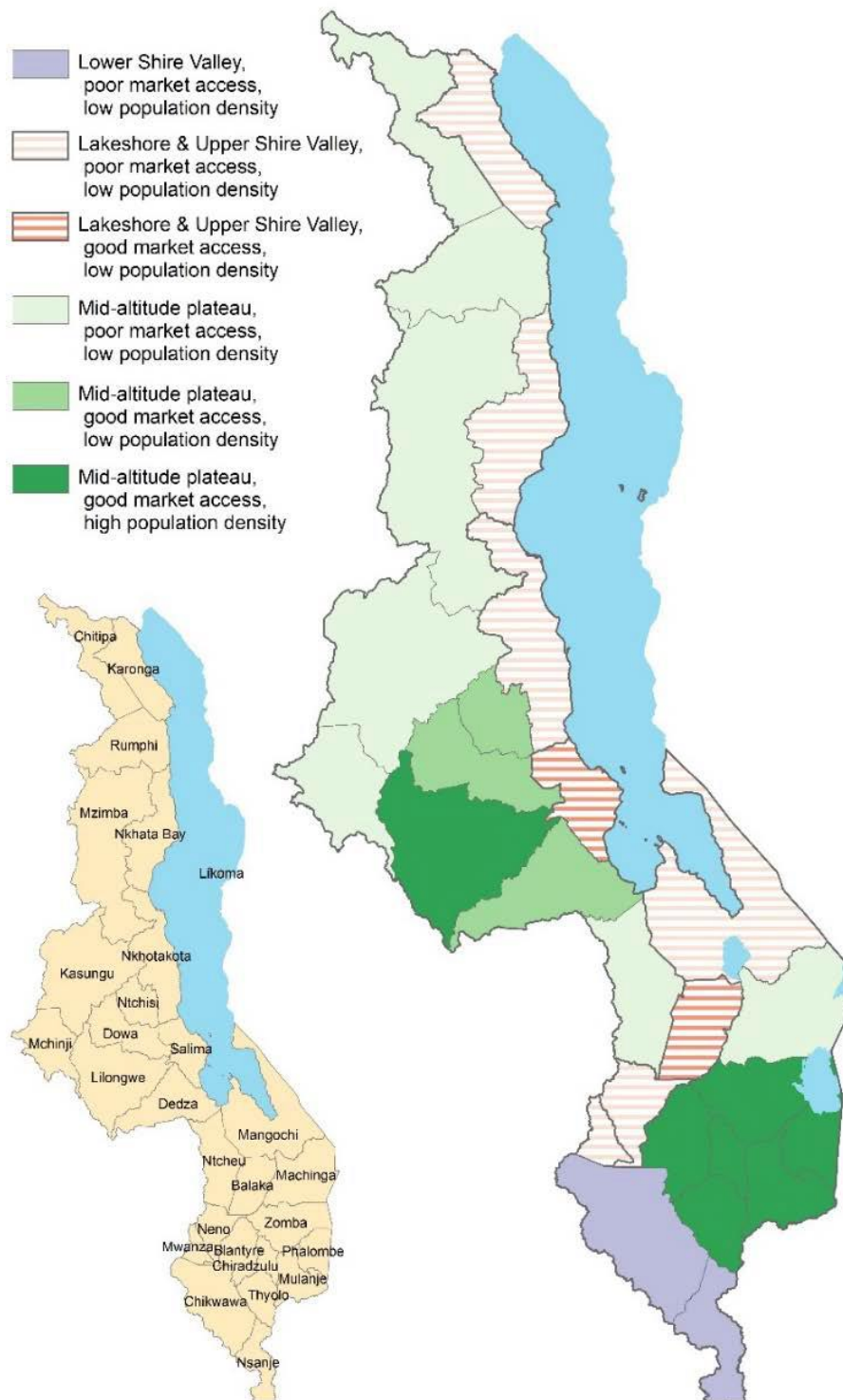


Figure 4-9 Agro-Ecological Zones for Malawi

4.3.11 Wetlands and Their Relevance to Local Livelihood

Malawi is essentially situated around lake Malawi, a lacustrine environment, crossed by many rivers draining into the lake. it is endowed with a very diversified wetland system.

The wetlands have a large potential to retain large volumes of water, resulting in people concentrating in these areas for livelihoods, especially farmers and fisherman. This close association between people and wetlands draw the

attention for the strategic importance of these ecosystems in the rural economy, and the need for an effective planning, management and conservation strategy.

Wetlands and other aquatic ecosystems cover about 20% of Malawi's surface area and they include the following:

Permanent Freshwater Lakes/Storage Areas

- Lake Malawi (24, 504 km²)
- Lake Chilwa (About 2,400 km² : open water (680 km²), Typha swamp (600 km²), marsh (390 km², floodplain grassland (580 km²))
- Lake Malombe (390 km²)

Permanent Freshwater Marshes/pools

- Mpatsanjoka Dambo (300 km²)
- Salima lakeshore plain wetlands (165 km²), has 11 marshes
- Nkhota-kota lakeshore lowland wetlands (Unaka Lagoon; Bana Swamp (Bana lagoon, an area of 150 km²); Dzenza Swamp (28km²); Chia Lagoon (an area of 11.2 km²))
- Limphasa dambo wetlands (120-130 km²)
- Ntakataka/ Wetlands
- Karonga Lakeshore plain wetlands (11 swamps and dambos)
- Elephant Marsh
- Ndindi Marsh
- Mpoto Lagoon
- Vwaza Marsh
- Marshes of Chitipa
- Rungwenya

Other Wetlands

- River basins

Mainly three wetland ecosystems occur in Malawi: a) Riverine system, palustrine system and b) Lacustrine system. The most important systems for agricultural development are the Riverine systems.

The riverine systems include the floodplains, which are important environments for livestock production, fisheries, wildlife and irrigated agriculture. A lot of agriculture is being practiced in these floodplains and a concerted effort has to be put into their protection and conservation if they are not to be degraded.

The palustrine system includes the lagoons, swamps, springs, dambos and peatlands. Dambos and peatlands are of enormous importance for small-scale agriculture.

4.3.12 Biodiversity Status

i) Vegetation resources

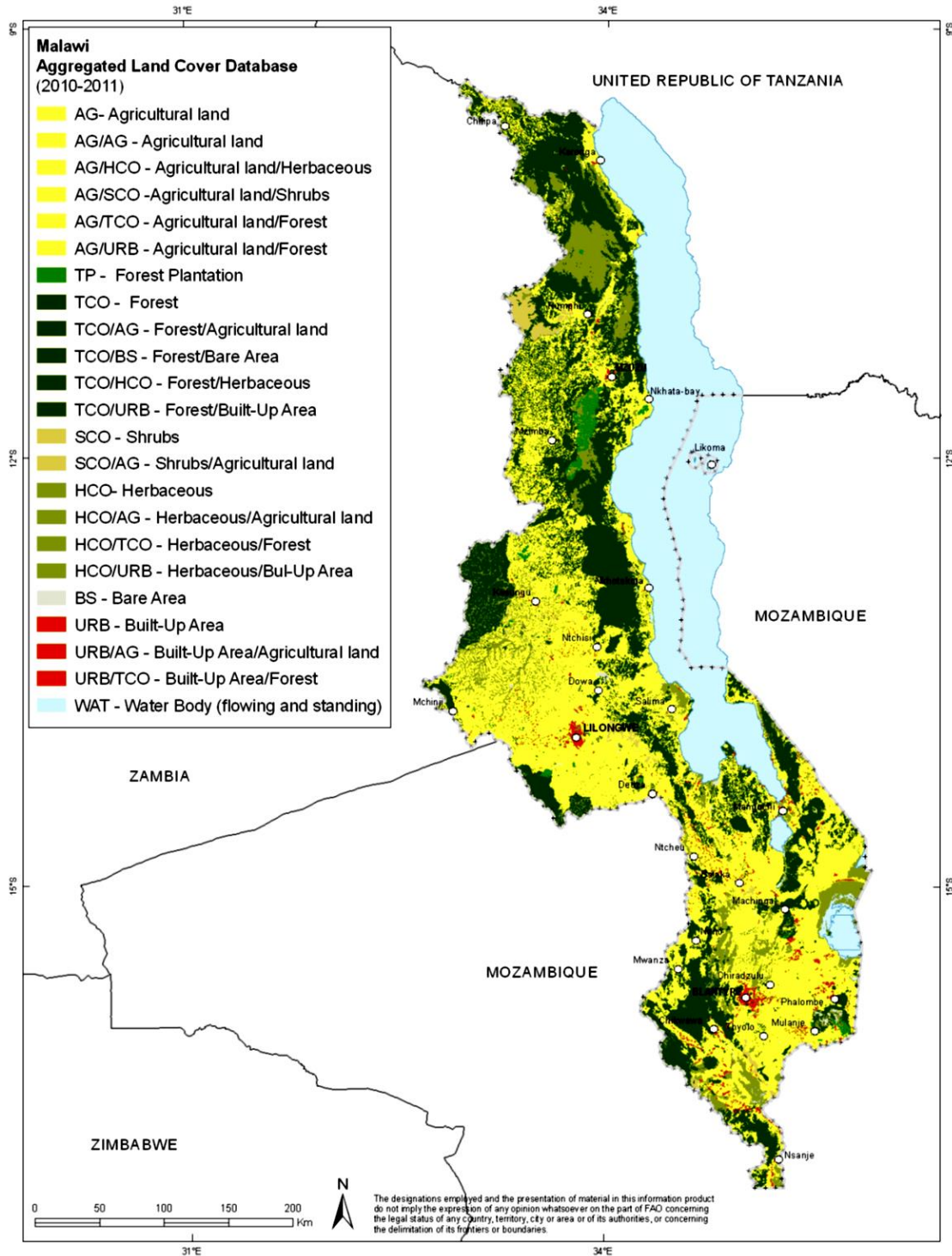


Figure 4-10 Land Cover map of Malawi (Latham J, 2013)

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 shed 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 these 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 TRADE 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.

ii) 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. Figure 4-10 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 by 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 a big threat to sustainable agriculture development in Malawi. As such, sustainable management and conservation of the forest ecosystem is imperative.

iii) National Parks and Wildlife Reserves.

National Parks and Wildlife Reserves in Malawi occupy 11.6 percent of the country's area, which is a total of 1.3 million hectares. About 8,700 hectares of this area form water body National Park – Lake Malawi. UNESCO designated the Lake Malawi National Park as a World Heritage Site. The rest of the area constitutes 5 national parks and 4 wildlife reserves. Malawi's national parks and wildlife reserves are endowed with about 3,500 species of plants, 4,000 species of animal species and about 1,000 micro-organisms. To date there are 1,500 species of vertebrates. 163 mammals; 92 reptiles; 54 amphibians; 620 species of birds and 583 species of fish that have been described (NEAP 1998). The above fauna and flora occupy different habitats. Some of the animal and fish species are rare, endangered and endemic to Malawi. Additionally, wildlife has aesthetics, scientific, cultural and recreational values of Malawi's population. Therefore, protection, conservation and sustainable utilisation of wildlife resources are of vital importance to Malawi because they provide food, timber,

tourism attraction, and sources of biological diversity. Illegal exploitation including encroachment, and poaching into the protected areas, and wildlife reserves continue to deplete the flora and fauna.

5. ENVIRONMENTAL AND SOCIAL ASSESSMENT PROCESS.

5.2 INTRODUCTION

This chapter describes the process for ensuring that potential environmental and social impacts are adequately addressed. The first step of the process is to consult the schedule for the Environment Law which lists all types of projects and activities that are subject to Environmental Assessment (EA). If the project is in the list the next step is to determine the level of EA work required. Agricultural projects generally require EA work under Malawi legislation.

It is recommended that most of the sub-projects that will be screened and approved for funding under TRADE be of Category "B" so that costly EA work be avoided. However, if an economically viable project is identified, there is nothing to stop it from being implemented. Further, TRADE should avoid sensitive and marginal areas.

5.2 SUB-PROJECT SITE SELECTION

TRADE will be operating at district level as depicted in figure 5-1 below. It is expected that TRADE may end up working in twenty (20) districts of Malawi. In terms of Environmental and social safeguards implementation, it is recommended that besides the Head office Environmental Specialist, each of the three Regions be manned by a dedicated Environmental Officer. Each regional Officer will service all the districts in his/her region and will work with the existing Agriculture and Local Government structures, including the Environment District Officers (EDO). (Where the EDO is not available then support can be provided through the acting EDOs).

TRADE will cover agricultural activities which include such value chain: Groundnuts, Soya Beans, Sunflower, Irish Potato, Dairy, Beef, Honey, Cassava, Red Sorghum, and Goats. The sub-project will be selected with the assistance of the District Teams comprising the PMU Field Officers, Regional Environmental Officer, EDO and the District Agricultural Officer. Figure 5-2 depicts the district agriculture extension services system (DAESS) which the district teams will have to work with and figure 5-3 depicts the organisational chart indicating the responsibilities at different levels.

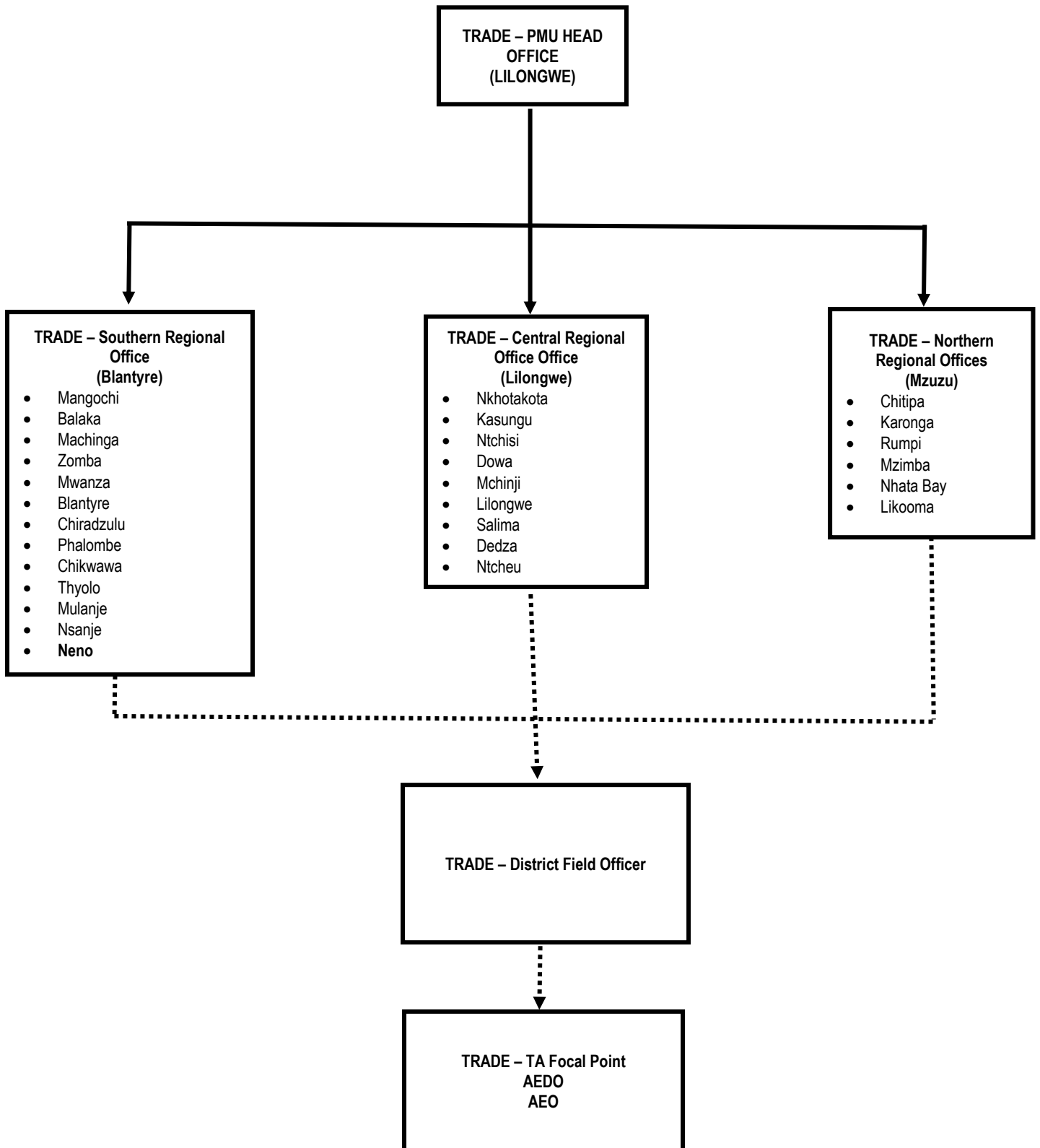


Figure 5-1 Project Implementation Structure

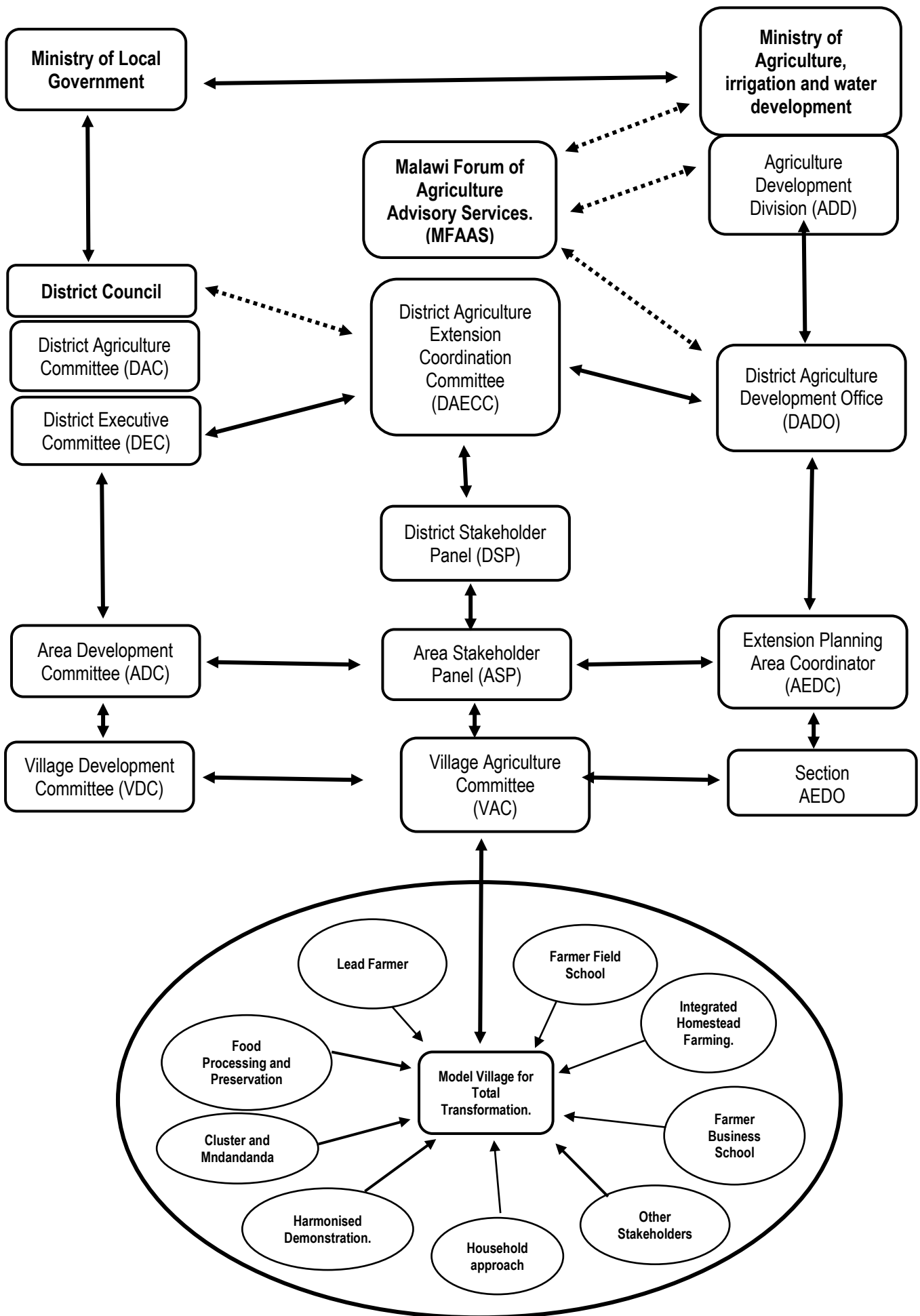


Figure 5-2 District Agriculture Extension Services System (DAESS)

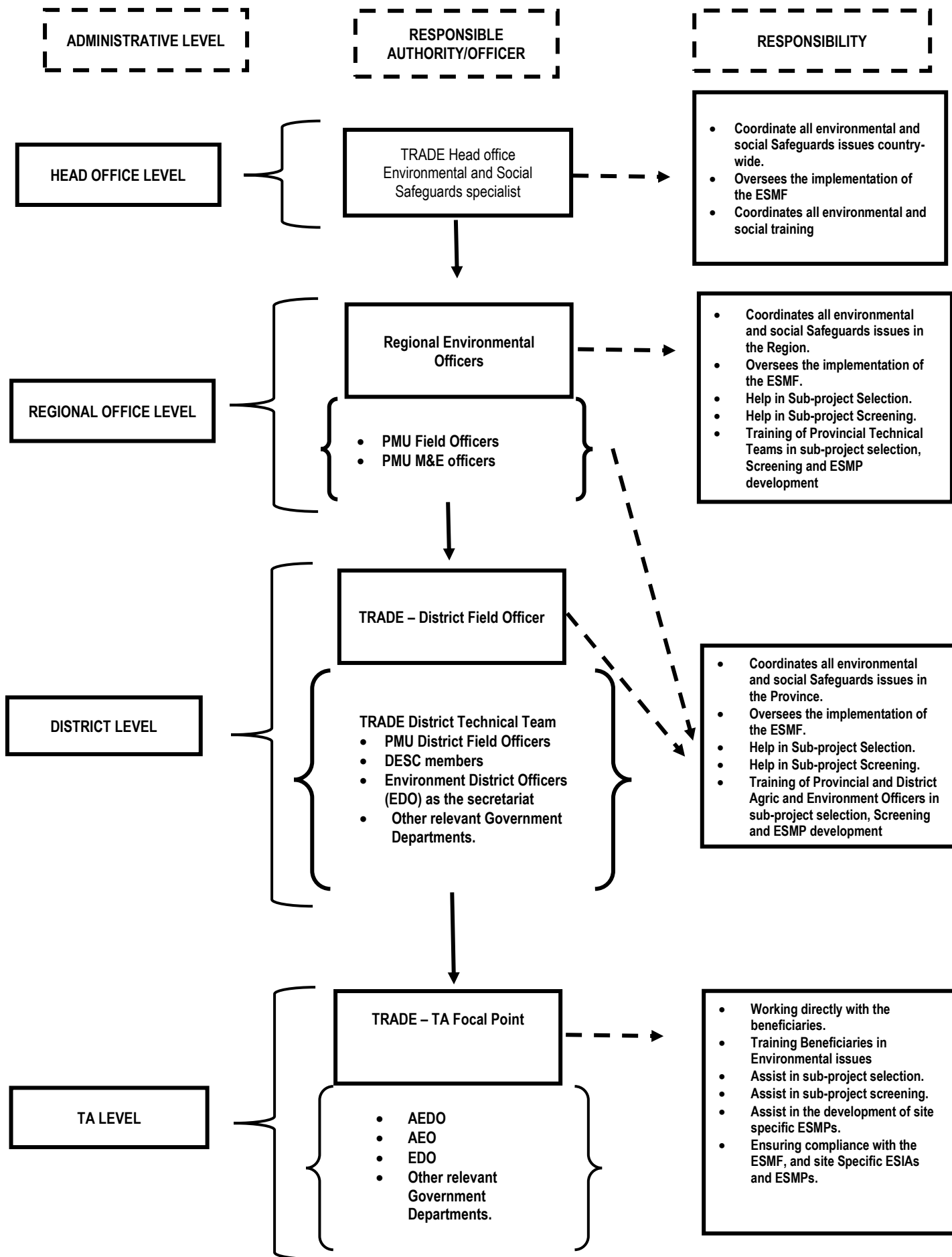


Figure 5-3 Organisational Chart for Safeguards Responsibilities

At PMU Head office, the Environmental Specialist will concentrate on the planning, supervision, reporting and support to regional offices.

At each regional office the Regional Environmental Officer will be deployed to support Regional project implementation activities and facilitate the communication with the central PMU. He will coordinate all environmental and social Safeguards issues in the Region, oversee the implementation of the ESMF and be responsible for Training of District Technical Teams in sub-project selection, Screening and ESMP development.

The Regional Environmental Officer has to train and work with the following staff for the following tabulated reasons:

Table 5-1 Participating Personnel at District level.

No.	STAFF	REASONS FOR PARTICIPATION
1.0	PMU Field Officer	The PMU Field Officers will overallly be in charge of all the field work and have to be involved in the environmental and social issues so that they can internalise them into the day to day implementation of the sub-projects.
2.0	PMU M&E Officers	The PMU M&E Officers will be responsible for the main monitoring programmes and must include environmental and social issues in some of their indicators.
3.0	TRADE– District Field Officer	TRADE – District Field Officer are the custodians of the agricultural programmes during the programme life. They therefore have to be well versed with the Safeguards requirements so that they can assist the beneficiaries to comply. Safeguards implementation should part of their routine work.
4.0	TRADE – TA Focal Point (AEDO, AEO, EDO or any other relevant Government Departments)	The Agricultural Officers at TA and lower levels are the ultimate custodians of the agricultural programmes at local level, especially after the project is complete. They therefore have to be involved from inception as a buy in process and then they will continue with these programmes as part of their routine work.
5.0	Environmental District Officers	The Environmental District Officers are the custodian of the environment at District level and must be involved so that they can enforce the sub-projects to comply, mainly with the national legislation and in particular with their site specific ESMPs and ESIA.

The District Technical teams will help the farmers in preparing their sub-projects applications to avoid or minimize adverse environmental and social impacts. They will use the Environmental and social screening form (see Appendix 1) together with information on typical sub-project impacts and mitigation measures in the environmental management plan (EMP) (Table 7.1 and Appendix 7).

The sections below (5.4.1 – 5.4.5) detail the stages of the environmental and social screening process (the screening process) leading towards the review and environmental and social approval of any sub-project that will be undertaken in the TRADE. This will be used in conjunction with the TRADE site selection criteria.

5.3 EXCLUSION LIST

Table 5-2 below provides criteria based on which sub-projects and activities which will not be eligible for financing under TRADE:

Table 5-2 Sub-project and Activity Exclusion List

No.	Negative sub project list
	The proposed TRADE programme will automatically exclude sub-projects that:
1	Require acquisition of land and involve physical or economic displacement of people.
2	Block the access to or use of land, water points and other livelihood resources used by others
3	Encroach onto fragile ecosystems, marginal lands or important natural habitats of national or international importance (e.g. ecologically-sensitive ecosystems; protected areas; natural habitat areas, forests and forest reserves, wetlands, national parks or game reserve; any other environmentally sensitive areas)
4	Impact on physical cultural resources of national or international importance and conservation value

5.4 SUB-PROJECT ENVIRONMENTAL AND SOCIAL SCREENING

The selected potential sub-projects will be subjected to a rigorous environmental and social screening process. The screening will be based on the IFAD SECAP categorisation of the project, which is overall an “A” due to the presence of construction works, road rehabilitation and agricultural works. The initial stage is a desk appraisal of the activities planned, including designs. The screening process will be carried out by the TRADE Regional Environmental Officer in conjunction with his/her district team comprising the PMU Field Officers, the District Environment Sub-Committee(DESC) serving as the Environmental Screening Organ, whilst the Environment District Officers (EDO) will serve as the secretariat . This initial screening will be carried out through the use of the Environmental and Social Screening Form (Appendix 1).

Completion of this screening form will facilitate the identification of potential environmental and social impacts, determination of their significance, assignment of the appropriate environmental and social category, proposal of appropriate environmental and social mitigation measures, and conduct any further environmental and social work, if necessary. The Environmental and Social Screening Process, is outlined in Figure 5-3 below.

5.4.1 Assigning the Environmental and Social Categories

The assignment of the appropriate environmental and social category to a particular sub-project will be based on the information provided in The Environmental and Social Screening Form (Appendix 1). The same technical team of experts, will be responsible for categorizing agricultural activities either as A, B, or C.

The assignment of the appropriate environmental and social category will also be based on provisions in SECAP. Consistent with these provisions, most of the sub-projects and activities of the current project are likely to be categorized as B, meaning that their potential adverse environmental and social impacts on human populations or environmentally important areas – including wetlands, forests, grasslands, and other natural habitats – are site-specific, few if any of the impacts are irreversible, and they can be mitigated readily. For these sub-projects, less comprehensive (or simplified) environmental assessments will have to be carried out which will include environmental and social management plans (ESMPs) specific to those sub-projects and their activities.

Some rehabilitation activities such as the water proofing of leaky tanks or painting buildings might be categorized as “C” if the environmental and social screening results indicate that such activities will have no significant environmental and social impacts and therefore do not require additional environmental and social work. Thus, if the screening form has only “No” entries, the proposed activity will not require further environmental and social work, and the technical team of experts will recommend approval of this proposal and implementation can proceed immediately.

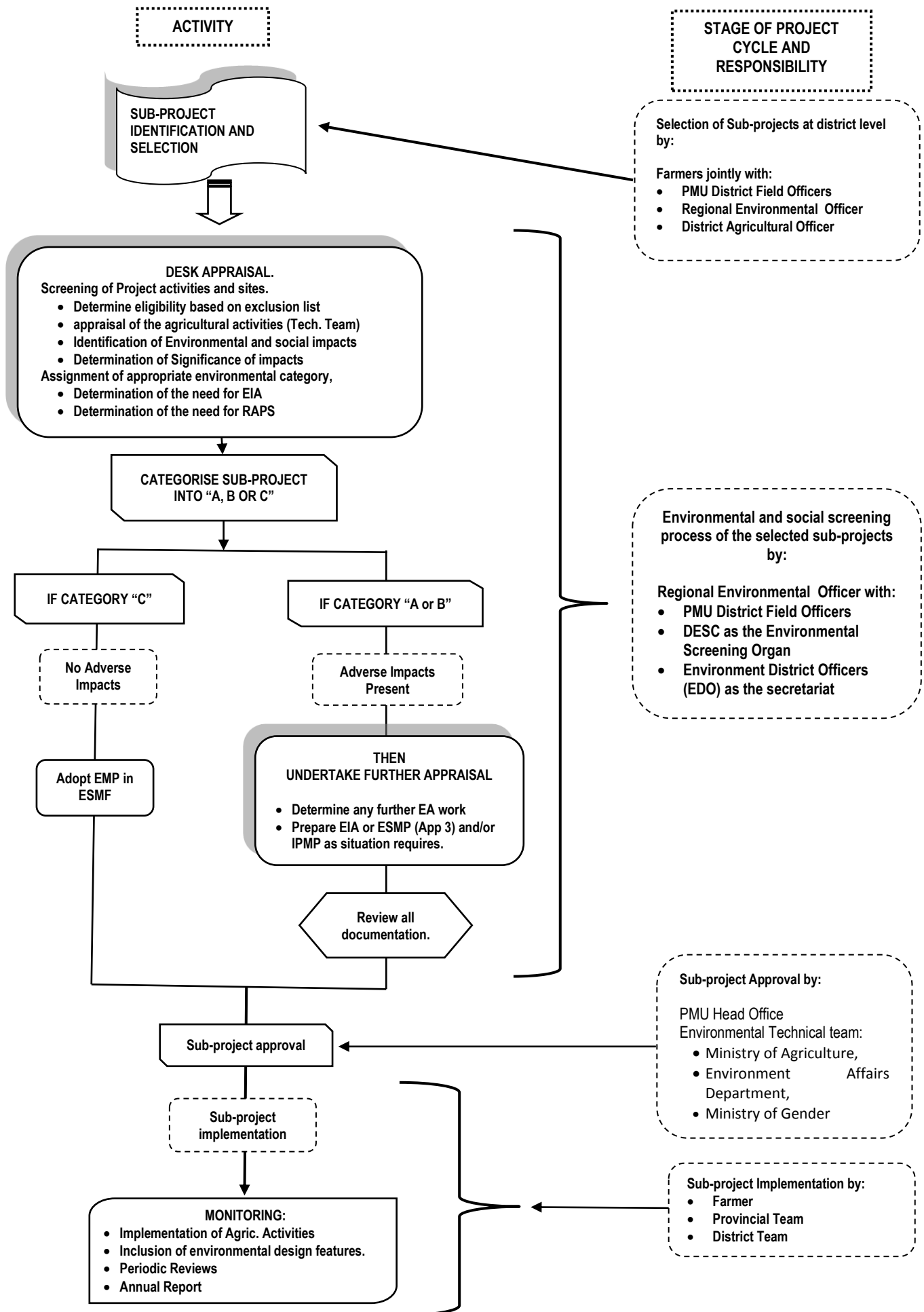


Figure 5-4 Sub-project Screening Process

5.4.2 Need for further Environmental and social work

Before submitting a subproject proposal to the PMU for approval, the District Screening team, led by the Regional Environmental Officer will further determine, whether: (a) the application of simple mitigation measures outlined in the Environmental and Social Screening Form (Appendix 1) will suffice; or (b) whether further Environmental and social work needs to be done.

If the District Screening team determines that the proposed sub-project may have environmental or social concerns that are not adequately addressed in the current documentation, or if the application meets certain criteria (see Table 5-3), the team will require a field appraisal before the sub-project application can be considered further. An example of a format for a field appraisal report is provided in (Appendix 2).

Table 5-3 Criteria for Requiring a Field Appraisal

No.	Criteria	Field Appraisal
1.0	A sub-project may-affect a protected area or a natural habitat	Determines if the sub-project will adequately avoid adverse effects on the protected area or natural habitat, as provided for in Chapter 8 of the ESMF
2.0	A sub-project may have an impact on ecologically sensitive ecosystems (e.g. of impact on wetlands)	A field appraisal determines the scale and level of impact. The application may need to be revised to describe how the sub-project will avoid or minimize adverse impacts to ecologically sensitive areas. This may require a distinct Environmental and Social Management Plan (ESMP) as outlined in chapter 10 of the ESMF
4.0	A sub-project will involve or introduce the use of pesticides	A field appraisal determines the scale and level of the concerns. If needed, a Pest Management Plan is prepared according to the requirements of Chapter 10 of the ESMF.
5.0	A sub-project may involve, or result in: <ul style="list-style-type: none"> • Diversion or use of surface waters; • Production of waste (e.g. slaughterhouse waste); • New or rebuilt irrigation or drainage • Small dams, weirs, reservoirs, wells, or water points. 	A field appraisal determines the scale and potential adverse effects, and may include an ESMP as outlined Chapter 10 of the ESMF.

Note: these criteria should be updated based on field experience in implementing sub-projects.

With the assistance of the Environment Department, the District Technical Team will supervise any further environmental work which may include the preparation of an ESMP (Appendix 7), or IPMP as the situation may require. Once all the requisite documentation has been compiled the District Technical Team will make recommendations to the **National Level** for approval.

5.4.3 Approval of Environmental and Social Work

The completed screening form along with any additional planning reports (e.g. IPMP) will be forwarded to the review authority, which is the Ministry of Local Government and Rural Development (MLGRD) at National Level, represented by TRADE. The review team will be assisted by environmentalists from the Environment Affairs Department to make sure that all the requirements are in place to avoid delays. (**Note** should be taken that Environment Affairs Department is the approval authority or licensing authority. The Documentation has to go up the MLGRD/TRADE ladders (with Guidance from Environment Affairs Department Environmentalists) who will then submit to Environment Affairs Department when satisfied that all documentation is in place.)

The first step in the approval process is to determine if all the relevant information has been provided, and that it is adequate. TRADE (Head Office Environment and Climate Change Officer) will also check if the technical team has thoroughly considered all environmental and social issues with regards to the identification of potential adverse effects arising from the sub-project as well as mitigating measures to adequately address negative impacts.

Based on the desk appraisal and if needed, the field appraisal, TRADE will refer the application to the approval authority – the Environment Affairs Department - with recommendations for approval conditions and implementation supervision (e.g. erosion control, pollution control, waste management, human safety).

5.4.4 Public Consultation and Disclosure

Public consultations are critical in preparing an effective proposal for the agricultural activities. The first step is to hold public consultations with the communities and all other interested/affected parties during the screening

process and in the course of any further environmental and social work. These consultations should identify key issues and determine how the concerns of all parties will be addressed.

The public consultation 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 EA guidelines, public consultation should be undertaken during (i) the preparation of the EA terms of reference; (ii) the carrying out of an EA; (iii) government review of an EA report; and (iv) the preparation of environmental and social terms and conditions of approval.

Once the Environment Affairs Department, the approval or licensing authority has approved the EA, GoM has to meet the consultation and disclosure requirements of IFAD. GoM will issue a disclosure letter to inform IFAD of (i) the Government's approval of the EA; (ii) the actual disclosure of these documents to all relevant stakeholders and potentially affected persons in Malawi; and (iii) the Government's authorization to IFAD to disclose these documents on its external website. The disclosure on the IFAD website is for Category A projects/ sub-projects. For the category "B" sub-projects, what is important is the in-country and site level disclosure.

5.4.5 Annual Monitoring and Reviews

Environmental and social monitoring needs to be carried out during the implementation of the sub-projects. Monitoring of the compliance of sub-project implementation with the mitigation measures set out in the sub-project's ESMP, or IPMP will be carried out jointly by the MoAIWD, extension teams and TRADE. TRADE field officers should supervise the monitoring activities and are required to report annually on sub-project activities during the preceding year. The information to be included in these annual reports is shown in Appendix 4. An annual monitoring report must be submitted to the IFAD by the TRADE PMU.

Compliance monitoring comprises on-site inspection of activities to verify that measures identified in the ESMP, or PMP are being implemented. This type of monitoring is similar to the normal tasks of a supervising engineer whose task is to ensure that the Contractor is achieving the required standards and quality of work. The appointed environmental and social safeguards specialists will have the responsibility of conducting the environmental and social inspections. An annual inspection report must be submitted (together with the monitoring report) to IFAD for review and approval.

Annual reviews may be carried out by an independent local consultant, NGO or other service provider that is not otherwise involved with TRADE. Annual reviews should evaluate the annual monitoring report from TRADE field officers and the annual inspection report from Ministry of Local Government and Rural Development (MLGRD)/TRADE. The purpose of the reviews is three-fold:

1. To assess compliance with ESMF procedures, learn lessons, and improve future ESMFs;
2. To assess performance in terms of environmental and social risk management;
3. To assess the occurrence of, and potential for, cumulative impacts due to TRADE-funded and other development activities.

The annual reviews will be a principal source of information to the TRADE for improving performance, and to IFAD supervision missions. Thus, they should be undertaken after the annual report on monitoring has been prepared and before IFAD supervision of the project. Guidance on undertaking annual reviews is provided in Appendix 3 of this ESMF.

(i) Monitoring Indicators

In order to be able to assess the effectiveness of the proposed mitigation measures for the impacts that will arise from the potential agricultural activities, The Regional Environmental Officers together with the M&E officers will conduct regular monitoring of all the sub-projects. The overall performance and effectiveness of the Program can be assessed through monitoring the following indicators:

- Hectarage of vegetation clearance;
- Incidences of work-related illnesses at construction sites or project areas.
- Incidences of work-related injuries at sites
- Number of pit latrines for excreta disposal for workers;

- Number of agro- infrastructure rehabilitated;
- Number of direct beneficiaries;
- Quality of construction materials for the agricultural infrastructure;
- Quality of water discharged from the establishments;
- Number of employment opportunities for locals;
- Number of new employees engaged by the project;
- Ratio of men to women employed by the project (ensure equity in the recruitment processes);
- Percentage of youth engaged in the projects;
- Number of safeguards training courses conducted for all staff including extension officers;
- Number of safeguards training courses conducted for beneficiaries;
- Ratio of men to women trained (ensure equity in the training processes);
- Implementation of the public consultation plan;
- Institution of planned maintenance of machines and infrastructure;
- Number of climate smart technologies adopted;
- Area of degraded land restored;
- Area of land under climate smart agriculture;
- quantity of pesticides and fertilizer used;
- Water and soil conservation structures established;
- Climate change coping mechanisms, and adaptation strategies employed.

5.5 ANALYSIS OF THE VISITED VALUE CHAINS

The project will focus on addressing factors that are currently limiting effective functioning of the different value chains. These value chains were identified through a highly consultative process with provincial, district and community level stakeholders. There was more insight during the field visit and consultations of which most of it was used to develop this ESMF. This section will give selected feedback mostly focusing on areas of concern that the project may need to interrogate but not limited to those only.

5.5.1 Milk Bulking Centre



Figure 5-5 Milk Production Cycle

For the Milk Bulking Centre value chain, the emphasis of interventions will be on the infrastructures that will facilitate collection, preservation, storage, aggregation, marketing outlets, and other marketing aspects. Such infrastructure will include the construction of milk collection centres, fully equipped with milk preservation facilities. The centres are also fitted with solar systems for a reliable source of electricity,

The model being used is that of each farmer raising their own cows, producing their own milk and delivering it to a central bulking centre. All the farmers are practicing zero grazing (Khola System) and depend on collecting fodder and feeding their cows in the pens. The fodder/grasses cut along river banks and in plantations. The grass is mixed with supplements like minerals and maize bran.

The farmers also receive technical assistance in raising the heifers, including artificial insemination to bring the required special milk breeds.

The farmers are also assisted with the establishment of a Village Saving and Loans scheme (VSL)

Table 5-4 Analysis of impacts of Milk Bulking Centres

Area (province/district)	Specific Activity	Potential social and environmental Impacts	Potential project benefits
Nantchefu Milk Bulking Centre, Thyolo District	Dairy Farming	<ul style="list-style-type: none"> - The farmer benefited from a Milk Bulking Centre under the RLEEP project. - Most of the dairy farmers practice zero grazing (khola system) at their homes. - Much labour and/or capital is required to feed and water the animals. <p>- Positive impacts:</p> <ul style="list-style-type: none"> - Zero grazing conserves the environment - Planting blue gums for Khola construction - Planting grass (elephant grass) for dry season fodder also grilicidious. - Use cow manure in their fields. <p>Negative impacts</p> <ul style="list-style-type: none"> - Cutting down of trees and grass for kholas and cattle feed from rivers bank and plantations damaging the environment. - Compromised home hygiene because of smells, flies around the home - Widespread use of chemicals and poor disposal system - Unhygienic handling of milk at farmers point of production, (milk is an excellent medium for bacteria, yeasts and moulds). - Domination of men in executive teams - No adequate gender friendly sanitation facilities with running water for hand washing. - The cooperation would like to go into milk processing and selling direct to consumers but is currently resource limited. 	<ul style="list-style-type: none"> - Khola system saves land space and it is environmentally friendly - Installation of renewable solar system as alternative source of energy to the main grid - Empowerment of farmers through training and refresher courses - Consideration of poor farmers through provision of a loan facility to kick-start their business <p>- Group Cohesion due to:</p> <ul style="list-style-type: none"> - Low milk rejects - Farmers handled well by committee - Complaints handled professionally by committee - Committee re-elected every three years

5.5.2 Road Rehabilitation and Construction



Figure 5-6 RLEP Rehabilitated Roads in Thyolo

In terms of road rehabilitation and construction the project interventions were targeted at making it easier for the farmers to get their produce to the major track roads for ease of transportation to the nearest markets.

The project concentrated on construction of bridges, culverts and catch dams and the rehabilitation of the roads themselves. In Thyolo the construction teams faced such challenges as inadequacy of road rehabilitation materials to use as surrounding area consists of private tea plantations resulting in conflict with plantation owners. In terms of road maintenance, the project did not manage to operationalise the community road maintenance club concept resulting in failure to maintain rehabilitated roads by both the district and community

Table 5-5 Analysis of impacts for Road Rehabilitation and Construction.

Area (province/district)	Specific Activity	Potential social and environmental Impacts	Potential project benefits
Jackson Ndata Farm Road, Cwcoka bridge, Thyolo District	Road Construction /Maintenance	<ul style="list-style-type: none"> -Area prone to high winds and high rainfall which weakens roads and storm drains on an annual basis. -Inadequate road rehabilitation materials to use as surrounding area consists of private tea plantations resulting in conflict with plantation owners as clubs try to get materials for maintenance -Failure to operationalise the community road maintenance club concept resulting 	-Improved road network and passage to markets

		<p>in failure to maintain rehabilitated roads by both the district and community</p> <ul style="list-style-type: none"> - Selection of contractor at national/project level weakens the district which is supposed to supervise the works. - Inadequate monitoring and/or lack of effective monitoring system of road maintenance works. 	
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5.5.3 WAREHOUSES



Figure 5-7 Bowe Warehouse

Warehouses were constructed as a means of Strengthening of Farmer Based Organisations, such as clubs, associations and cooperatives, to enable them to become commercial entities, effectively supporting local smallholder producers. - the support will include improving services to their members such as bulk buying of inputs, product bulking for joint marketing, creation of commercial partnerships with private companies in 4Ps model or linkages to large commodity traders and increasing capital (shares) and joint investments to increase profits.

Two warehouses were visited, the Bowe Cooperative warehouse in Kasungu and the Mwati Warehouse, in Mchinji. The two are analysed below:

Table 5-6 Analysis of impacts for Warehouses

Area (province/district)	Specific Activity	Potential social and environmental Impacts	Potential project benefits
Bowe Cooperative, Kasungu District	Warehouse	<ul style="list-style-type: none"> -The cooperative has diversified from mainstream warehousing business and started processing of soya into cooking oil. -Meeting the required standards according to Malawi Bureau of Standards (MBS) in terms of health and hygiene, drainage, safety precautions and quality of the products is proving to be difficult. -Poor drainage and disposal of by-products 	<ul style="list-style-type: none"> -The cooperative is thriving and making farming business much more manageable. -Farmers were taught to plant trees and the whole area surrounding the cooperative premises which used to be bare has been transformed into a thick forest. -The members get education on

		<p>from cooking oil processing</p> <ul style="list-style-type: none"> -No adequate gender friendly sanitation facilities with running water for hand washing but women and youths spend a lot of time at the centre. -Most of the farmers depend on rain-fed agriculture and there is no plan yet in place to shield farmer during difficult years. -High default risk as farmers find it difficult to pay back their farm input loans due to either poor agricultural season, high interest rates and/or lack of discipline. -Failure by the cooperative to be free from debt resulting in failure to break poverty cycle -There is a history of mismanagement of funds and favouritism which has resulted in loss of trust in male chairpersons. - 	<p>sustainable use of fertilisers and organic manure.</p> <ul style="list-style-type: none"> -Meeting the required standards according to Malawi Bureau of Standards (MBS) in terms of health and hygiene, drainage, safety precautions and quality of the products still proving to be difficult -Economic transformation with some building houses with corrugated iron roofs, bicycles, motor cycles and various livestock. -
Mwati Warehouse, Mchinji	Warehouse	<ul style="list-style-type: none"> -The rate at which members leave the club is too high which points to a problem (from 300 to 92) -The Cooperative is not aware whether they are operating at a profit or not. -The cooperative is servicing a bank loan which was secured in order to pay farmers as they bring their produce. However, this is proving to be difficult due to low business at the warehouse. -They have thought of making flour from maize and cooking oil from nuts but do not have capacity in terms of skills and finances -No adequate gender friendly sanitation facilities with running water for hand washing but women and youths spend a lot of time at the centre. 	<ul style="list-style-type: none"> -Farmers have adopted the skills into other ventures at home -

5.5.4 BEE KEEPING



Figure 5-8 Luweya Bee Keepers

TRADE will construct honey collection and storage centres. These are also meant to Strengthen Farmer Based Organisations, such as clubs, associations and cooperatives, to enable them to become commercial entities, by effectively supporting local smallholder honey producers. This support will include improving services to their members such as centrally collecting the honey for product bulking and joint marketing. The impacts from bee keeping are analysed below:

Table 5-7 Analysis of impacts for Bee Keeping.

Area (province/district)	Specific Activity	Potential social and environmental Impacts	Potential project benefits
Luweya Bee Keepers Association, Nkata Bay District	Honey	<ul style="list-style-type: none"> -Honey production itself preserves forests as farmers make an effort to maintain the forests for the sake of the honey -Honey farming is seasonal and leaves the farmers with no income for the period when there is no nectar -Compromised hygiene as farmers process their honey at home before taking it to the collection centre -Limited knowledge and skills confine farmers to selling honey only whilst there are other stuff from the bee hive that can be converted into money -No adequate gender friendly sanitation facilities with running water for hand washing but women and youths spend a lot of time at the centre. -Interest on bank loans is too high for the farmers to be able to develop -Honey buyers do not usually pay cash upon collection of honey which is a problem for farmers. -There are less women because when the activity was introduced, it targeted mostly men and Bee keeping is considered a high-risk activity. -Most farmers do not have the required protective clothing as they find it to be too expensive. -The association needs to be empowered to be able to pay the individual farmers immediately when they bring the honey - 	<ul style="list-style-type: none"> -Good environmental conservation as farmers are encouraged to preserve places set aside for bee keeping. Tree cutting is discouraged -The Association has been sharing information on radio to help and motivate other farmers

5.5.5 BEEF VALUE CHAIN

For the beef value chain, the emphasis of the interventions will be on improving the local breed to commercialisation, rehabilitating and constructing infrastructure that will facilitate preservation, storage, aggregation, marketing outlets, and other marketing aspects. Such infrastructure will include cattle fairs, dip tanks, and cattle fattening centres. A cattle market and a dip tank were visited in the survey; Kasoka Cattle Market, Karonga District and the Tilola Dip Tank Association, Karonga District.



Figure 5-9 Kasoba Cattle Market

The approach taken in the beef value chain involves contracting a service provider, NyamaWorld, who provided the farmers with Bosmara bulls and semen for artificial insemination and crossing with the local Zeb breed to produce a beefy cross breed. In turn the farmers were supposed to sell their first two calves to NyamaWorld when they were six months old.

The project also rehabilitated dip tanks for animal health and also built cattle markets where the farmers could go and sell their animals.

An analysis of the impacts from the beef value chain is outlined below:

Table 5-8 Analysis of impacts for beef value chain.

Area (province/district)	Specific Activity	Potential social and environmental Impacts	Potential project benefits
Kasoka Cattle Market, Karonga District	Cattle Market	<ul style="list-style-type: none"> -No system/model to effectively run the market. The membership base is too loose and not well defined. There is no commitment from the executive to run the market as a business. -Business is affected by disease incidences such as foot and mouth which result in banning of cattle trading. -Cattle are also at risk from Lumpy Skin disease which is caused by a virus and East Coast fever which is transmitted by ticks. -Conflict with other land owners as cattle move to and from the markets destroying crop fields and eroding small paths. -Less women own cattle and the market is more frequented by men. The women that are seen are in most cases single mothers or their husbands will be working elsewhere. -Middlemen are taking advantage of farmers in between market days to buy at low prices especially from desperate farmers. 	<ul style="list-style-type: none"> -Farmers get to sell their cattle in a transparent manner and at a fair price -Movement permit is checked upon arrival at the market as a way of controlling diseases and curb against theft. The permit includes vaccination history and disease information.

<p>Tilola Dip Tank Association, Karonga District</p>	<p>Dip Tank</p>	<ul style="list-style-type: none"> -Some farmers have to cross a busy main road with their cattle to get to the dip tank which is a risk for both the cattle and the motorists. -Farmers failing to operate and maintain the dip tank beyond Government assistance. -No envisaged economic benefit from dipping their cattle - Limited business management skills within the executive to effectively run the group and its activities. -Loose group cohesion and poor unmotivated leadership. -Members may want to contribute towards maintenance but there is no organised system. -Existence of an alternative makes the dip tank less important. The community however maybe aware that dipping is more effective than spraying and pour-on methods -Vandalism and theft of various components of the dip tank is happening right on community's watch. -Need training on O&M, group dynamics and fund management - 	<ul style="list-style-type: none"> -Effective disease control as the Veterinary Officer attends to the cattle every two weeks at the dip tank. -The Vet Officer also attends to sick cattle and other requirements at one place. It is difficult to conduct individual home visits. -
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6. BENEFICIAL AND ADVERSE IMPACTS

6.1 ACTIVITIES AND SOURCES OF ENVIRONMENTAL AND SOCIAL IMPACTS.

TRADE is expected to cover a minimum of 11 districts and 7 commodities targeting at least 127,000 rural poor households with potential to be engaged. The main commodities that have been identified are groundnuts, soya bean, sunflower Irish potato, dairy, beef and honey⁶ and will be supported through 3 interlinked components and their sub components and activities as shown in the 6-1 below.

Table 6-1 Activities in each component of the TRADE.

TRADE Programme Main Component	Sub-component	Summary of Related Activities
Sustainable Producer-Private Partnership	Sustainable intensification and VC Commercialisation	<ul style="list-style-type: none"> - Access to productivity and quality enhancing technologies, including postharvest management through <ul style="list-style-type: none"> o Good agricultural practices o Climate Smart Agriculture interventions - Development of business plans - Access to new technologies; infrastructure and/or equipment for processing through matching grants
	Capacity development of farmers and farmer-based organizations	<ul style="list-style-type: none"> - Strengthening of Farmer Based Organisations - Farmer Business Schools - Support youth-led businesses - Targeted nutrition education - Promotion of capacity for resilience to climate change
Enabling Environment for Smallholder Commercialisation	Enabling environment for commercial agriculture	<ul style="list-style-type: none"> - Value Chain policies support - Legal and regulatory support - Improve market information
	Enabling Infrastructure	<ul style="list-style-type: none"> - Rehabilitation of roads and drainage - Construction of structures and set up of Road maintenance mechanisms. - Construction of Warehouses - Construction of Livestock markets - Construction of Honey storage centres - Construction of Milk Bulking Centres - Providing water for communities
Institutional Support and Programme management and coordination	Capacity building and value chain governance	<ul style="list-style-type: none"> - Capacity building for public sector and non-state actors to improve their skills to support agribusiness development and producer-private-partnerships.
	Programme management and Knowledge Management	<ul style="list-style-type: none"> - Generation of knowledge - Promoting innovations - Sharing and learning

The overall goal of TRADE is to contribute to improved sustainable livelihoods of rural people in Malawi and the programme development objective is to increase value chain commercialisation and resilience of rural poor and smallholder producers. During the ESMF preparation, participatory assessments including community level visits and site visits were carried out with the aim of matching the proposed programme components with the surrounding environmental and socio-cultural resources to determine the most likely outcome. Naturally, since TRADE was designed at the backdrop of RLEEP successes, learning visits, key informant interviews and discussions were conducted in the previous project implementation areas. Stakeholders were identified using a stakeholder identification matrix and were involved in the identification of the potential impacts of TRADE. This

⁶ This could be about 9 more districts, since there are already indications that there are potential commercial opportunities in these districts for cassava, red sorghum and goat with partnership, between small producers and the private sector, and collaboration with other development partners.

section presents both the likely positive and negative impacts that can arise from the programme and its sub components.

During the execution of the programme several activities will be undertaken and they will result in products and by-products and will impact on the environment in various ways. The following is an outline of the possible activities, products and by-products:

Table 6-2 Activities, Products and By-Products

No.	Project Type	Activities	Possible Products	Possible by Products
1.0	Rain Fed	<ul style="list-style-type: none"> • Stakeholder Consultations • Selection of suitable sites. • Designation of land • Land preparation • Tilling • Levelling • Setting up of agro-processing plant 	<ul style="list-style-type: none"> • Crops like: <ul style="list-style-type: none"> ○ Maize ○ Rice ○ Legumes • Timber from established forests • Organic Fertilizer 	<ul style="list-style-type: none"> • Waste and dumps from construction • Fertilizer and biocides washed into rivers • Stover from Crop Harvesting. • Waste from Agro-processing. • Waste from timber processing.
2.0	Value Addition Sites	Rice Threshing/Winnowing (1) „ Destoner(1) „ Grader „ Weighing and Packaging (2) Cassava – HQCF (1) Legume Dehuller (2) Clean/Destoner (1) Oil seed tempering (1) Oil pressing (2) Feed mill (1) Storage silos with drying(2x50MT) Mini testing unit	Polished rice Brown rice Destoned, cleaned paddy High Quality Cassava Flour (HQCF) Dahl Crude vegetable oil Livestock feed	<ul style="list-style-type: none"> • Rice husk • Cassava peeling • Effluent water • Solid Waste • Waste oil • Dust • Noise • Chemicals waste

6.2 SIGNIFICANCE RATING OF IMPACTS

The significance of adverse impacts from projects activities will be rated on the basis of their magnitude, duration and probability as shown below in Table 6-3. The scales of rating are 1 to 5 with 1 being low and 5 being high. Where an aspect is affected by more than one impact, the highest rating is taken as the applicable significance of the impact. The ESMP in Chapter 8 only considers the impacts that have been rated moderate and high significance as these present impacts that need attention.

Table 6-3 Impact Magnitude Scoring Table. (adapted from Ryan Edwards, 2011)

Criteria	Scoring	Description
Quality		Nature of Environmental Change
Positive	N/A	Beneficial impacts
Negative	N/A	Adverse Impacts
Probability		the likelihood of the impact actually occurring
Unlikely	1	The chance of the impact occurring is extremely low (Less than a 20% chance of occurrence).
Fairly Unlikely	2	The chance of the impact occurring is moderately low (Between a 20% to 40% chance of occurrence).
Possible	3	The impact may occur (Between a 40% to 60% chance of occurrence).
Probable	4	The impact will likely occur (Between a 60% to 80% chance of

Criteria	Scoring	Description
		occurrence).
Definite	5	Impact will certainly occur (Greater than an 80% chance of occurrence).
Severity		The degree of disturbance
Very Low	1	Impact affects the quality, use and integrity of the system/component in a way that is barely perceptible.
Low	2	Impact alters the quality, use and integrity of the system/component but system/ component still continues to function in a slightly modified way and maintains original integrity (no/limited impact on integrity).
Moderate	3	Impact alters the quality, use and integrity of the system/component but system/component still continues to function in a moderately modified way and maintains general integrity.
High	4	Impact affects the continued viability of the system/component and the quality, use, integrity and functionality of the system or component is severely impaired and may temporarily cease. High costs of rehabilitation and remediation.
Very High	5	Impact affects the continued viability of the system/component and the quality, use, integrity and functionality of the system or component permanently ceases and is irreversibly impaired (system collapse). Rehabilitation and remediation often impossible. If possible, rehabilitation and remediation often unfeasible due to extremely high costs of rehabilitation and remediation.
Extent		the spatial influence of the effects produced by the impact.
Project Area (Site)	1	Effects of an impact experienced within or in close proximity (100m) to the project site. However, the size of the site needs to be taken into account. A really large site may have to be scored according to category 2 below.
Surrounding Area	2	Effects of an impact experienced beyond the project site but within a 2km radius of the site.
Local	3	Effects of an impact experienced within the local area (e.g. between a 2km to 50km radius of the site).
Regional	4	Effects of an impact experienced within the local region (e.g. between a 50km to 200km radius of the site).
National (larger area)	5	Effects of an impact experienced within a large geographic area beyond a 200km radius of the site.
Duration		Period when the Impact is Expected to Occur
Short-term	1	The impact and its effects will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase (0 – 1 years), or the impact and its effects will last for the period of a relatively short construction period and a limited recovery time after construction, thereafter it will be entirely negated (0 – 2 years).
Medium-Short-term	2	The impact and its effects will continue or last for the period of a relatively long construction period and/or a limited recovery time after this construction period, thereafter it will be entirely negated (2 – 5 years).
Medium-Long-term	3	The impact and its effects will continue or last for some time after the construction phase but will be mitigated by direct human action or by natural processes thereafter (5 – 15 years)

Criteria	Scoring	Description
Long-term	4	The impact and its effects will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter (15 – 50 years).
Permanent	5	The only class of impact that will be non-transitory. Mitigation either by man or natural process will not occur in such a way or such a time span that the impact can be considered transient (Indefinite).
Magnitude		Effect on Environmental and Social Processes
Negligible	< 6	Not Serious: Changes are barely perceptible.
Low	6-12	Acceptable but Undesirable.
Moderate	13-17	Very Serious:
High	>17	Totally Unacceptable.

Note: Probability + Severity + Extent + Duration = Magnitude

6.3 OUTLINE OF THE TYPICAL POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS.

The activities under TRADE will generate several environmental and social impacts throughout their project cycle from planning to decommissioning. This is because the activities involve extensive civil works during construction and rehabilitation, intensive abstraction and use of water resources, depletion of forest resources and interaction of many people within a project location area. The activities also generate impacts that result in incidences of water-borne and water related diseases, pollution by agro-chemicals, degradation and salinization of soil. Consequently, several environmental components are affected in one way or the other by such activities.

6.3.1 Environmental Impact Analysis

The following is a detailed outline of the potential environmental impacts that will be generated by the implantation of TRADE activities in the selected districts. The critical components for environmental related negative impacts are derived from the TRADE activities that will require development, construction and operation of infrastructure such as:

- water infrastructure development e.g. boreholes;
- expanding land for crop farming;
- intensification of inputs and mechanisation of farm operations;
- road construction/rehabilitation;
- construction of cattle value chain infrastructure (crush pens, dip tanks, slaughter houses/slabs, storage and market Fairs;
- provision of agricultural storage facilities and construction of market facilities and processing units.

The potential environmental impacts were identified through a comprehensive stakeholder consultation process and field investigations of the potential sites.

i. Environment Degradation

a) **Drought/Floods:**

There are districts that experience erratic rainfall patterns and experience drought and floods alternatively. Drought affects availability of water and agricultural activities and may leave farmers worse off. Floods in some areas although favourable for rice are damaging the environment.

b) **Destruction of vegetation:**

Intensification of beef and dairy farming has its challenges in practice. There will be increased cutting down of trees for kholas for both open and zero grazing systems. Dairy cows require specific types of grass one of which is found along river banks.

Loss of plant cover leads to compaction of soil, exposure of topsoil and possibility for erosion, weakening and degradation of soils, disturbance of the natural landscape and disfiguring of the natural morphology. This also results in siltation of rivers and change of river flows paving way for flooding. Excessive cutting down of grass removes soil nutrients for vegetation regrowth. More so, this exposes homes especially in parts of the country that experience high winds. There is need to continue raising awareness of adverse environmental practices and also impart skills and technologies of environmental reclamation.

c) Soil and Land Degradation

Although construction work will be limited to local areas, some projects may involve works that will expose the soils to erosion and also compact it and break down the soil structure which will potentially decrease the drainage of the areas. This will generally result in soil erosion, defacing of the countryside and generation of dust.

Furthermore, the risk of accidental discharge of hazardous products, leakage of hydrocarbons, oils or grease from construction machinery also constitute potential sources of soils and water pollution.

d) Environment nuisance:

Free roaming cattle cause problems in the environment and in people's crop fields resulting in tension and conflicts. People are failing to maintain homestead fields because of free roaming cattle. Selection of beneficiaries should be based on whether a farmer already has a khola or not to minimise open grazing. This will also promote home gardens during dry season.

e) Poor drainage system:

Absence of and poorly constructed drainage system cause harm to the environment and to public health. There is need for FBOs that venture into processing to be trained on required infrastructure standards and to have skilled personnel to do the construction.

ii) Effects on Ecosystems

a) Habitat loss and biodiversity disturbances

Noise and vibrations from the development activities and encroachment by human beings may disturb the normal roaming patterns of wild animals and cause them to migrate away from the area and/or be in conflict with human beings. The project activities may impact on aquatic ecologies by modifying them or destroying them altogether and thus impacting on the normal habitats of aquatic lifeforms.

b) Loss of fragile ecosystems

Establishment of agricultural activities in some areas may impact on fragile ecosystems like wetlands, flood plains and mountain tops. The farmers may drain the wetlands to create arable land, unsustainably cultivate in these wetlands, and also cultivate on steep slopes and mountain tops without adequate conservation measures. This will result in the fast degradation of the wetlands, erosion of the mountain tops and sides and subsequent loss of the natural purpose of these systems (systems failure)

c) Disturbance of marginal areas

Because of the general terrain of the country, many marginal lands exist and establishing the projects in such areas can pose serious threats to further degradation of the marginal lands.

d) Environmental Conservation Measures

Bee keeping entails protection of vegetation for the bees to collect nectar. The bee keepers have to protect and conserve the environment in the process. At times they have to revegetate by planting required species.

iii) Pollutant Emissions

a) Effluent and Solid Waste

Most agricultural, livestock, agro-processing, packaging and marketing operations produce liquid effluent and solid waste. The effluent pollutes soil and water resources.

Construction and road rehabilitation works will generate spoil materials and construction waste. Concentration of workers will also contribute to localized increase of waste. Littering and indiscriminate dumping of solid waste pollutes the land and ultimately the water resources.

b) Ambient air quality

Air quality will be impacted by emissions from processing plants. Some horticultural operations may use steam boilers, heating systems or food processors that use fossil fuels, and that produce smoke. All drying processes of agricultural products produce dust. All these require smoke and dust control and air filtration to bring air quality both inside and outside the plant within the national environmental standards and WHO recommended guideline levels.

Road rehabilitation and construction will result in a lot of dust being raised, requiring intense dust suppression measures to be employed.

These operations result in the pollution of air, increases in bronchial disorders, impaired visibility on the roads, disturbs normal developments of vegetation and can cause acid rain.

c) Water Quality

Quality of water especially rivers and groundwater may be affected negatively by discharge of fertilizers, nutrients, different chemicals to be used for pest management, and debris from civil works, oil spills among others. Groundwater contamination occurs from percolation of oil and lubricants spills into the soil. Surface water pollution may result from uncontrolled discharges into freshwater or brackish river waters. There are still many people relying on river water as a source for drinking water.

Wet processes for food and beverage production require liquid waste water treatment to meet national standards. These include such facilities as Slaughter houses and meat products

These operations result in the pollution of the environment, water resources, death of aquatic animals and general loss of the ordinary use of water. The polluted water affects plant growth and treatment cost of that water becomes very high.

d) Agro-Chemicals Pollution:

Concerns are on environmental pollution from agro-chemicals especially in irrigation schemes with the intensified drive on production. Increased use of inoculants/fertilisers especially in soya beans production renders soils unproductive after some time. There is a need to educate farmers on the safe handling, correct application of the chemicals and safe disposal of empty containers. In all the FBOs, minimum of one person should receive in-depth training including first aid procedures.

iv) Civil Works

a) Climate resilient structures:

There are districts that are earthquake and flood prone. There is need for strong and resistant design and building materials that will withstand any pressure to a greater extent. It is important for site specific assessments to be carried out.

b) Brick Moulding and extraction of building materials:

It is expected that bricks will be moulded and burnt for warehouses construction around the country. Pits will be dug and trees will be cut for firewood. Efforts must be made to minimise the damage, cover the pits and intensify reforestation.

c) Poor Workmanship:

There is risk of hiring contractors who are unqualified and inexperienced. Furthermore, a contractor with no monitoring may be negligent failing to follow protocol as required. There is need for close monitoring of construction works from design to completion. A certified engineer should test and certify the works.

d) Construction/rehabilitation of water supplies and irrigation schemes

Rehabilitation of weirs and construction of irrigation systems will result in potential changes in flow patterns, negatively impacting downstream users, wildlife and natural habitats (particularly aquatic habitats). Other issues include capture of sediments, water-borne diseases, flooding and soil loss of nearby farmlands.

e) Temporary Visual Intrusion

Rehabilitation and upgrading of roads, irrigation schemes, warehouses, processing plants and other possible facilities will change the aesthetics of the project areas and leave marred landscapes. Also, the clearing of vegetation required for the refurbishment of existing buildings will impact the visual amenity of nearby houses and surrounding communities.

v) Agro Health

a) Cattle disease:

There is risk of cattle farming being affected by incidence of disease lumpy skin, East Coast Fever and Foot and Mouth Disease. For areas situated at the border with other countries, control is even more difficult. There is need to capacitate farmers on good husbandry, the importance of vaccination and the importance of movement permit that details the health history of the animals. This will also solve the problem of middlemen who take advantage of farmers before they bring their cattle to the market.

b) Genetically Modified Agriculture

Agriculture research stations and some service providers may introduce Genetically Modified breeds in pursuit of better breeds. This will introduce GMOs into the food chain resulting in unknown effects on the consumers.

6.3.2 Magnitude of Potential Environmental Impacts

Table 6-4 Magnitude of Potential Environmental Impacts

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT					
	CATEGORY	CAUSE	IMPACT	QUALITY	PROBABILITY	SEVERITY OR SIGNIFICANCE	EXTENT	DURATION	MAGNITUDE OF IMPACT
i)	Environment Degradation								
(a)	Drought/Floods	<ul style="list-style-type: none"> Climate change effects Some districts are prone to extremes of climate 	<ul style="list-style-type: none"> Lack of water for agricultural activities Inundation of crops in the rain season Causing food shortages 	Negative	3	4	3	3	13 Moderate
(b)	Destruction of Vegetation. Clearing of vegetation for infrastructure development	<ul style="list-style-type: none"> Expanding land for Agriculture Construction of processing plants construction of chicken runs construction of Cattle value chain infrastructure Construction of access roads Construction of Market Facilities 	<ul style="list-style-type: none"> Removal of vegetation cover. Exposure of topsoil and possibility for erosion. Loss of biodiversity and habitat changes. Disturbances of wildlife Compaction of soil. Pollution of soil and water from oil leakage. Dust and noise generation. 	Negative	5	3	1	5	14 Moderate
(c)	Soil and Land degradation.	<ul style="list-style-type: none"> Overgrazing Intensive farming 	<ul style="list-style-type: none"> Soil and water pollution. Soil erosion 	Negative	2	5	1	4	12 Low

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT					
	CATEGORY	CAUSE	IMPACT	QUALITY	PROBABILITY	SEVERITY OR SIGNIFICANCE	EXTENT	DURATION	MAGNITUDE OF IMPACT
		techniques <ul style="list-style-type: none"> • inappropriate Irrigation and drainage management • Inappropriate use of farm machinery • Accidental discharge of hazardous substances 	<ul style="list-style-type: none"> • Soil salinization • Loss in soil fertility 						
(d)	Environment nuisance.	<ul style="list-style-type: none"> • Free roaming livestock 	<ul style="list-style-type: none"> • Destruction of natural features, crops and gardens • Overgrazing the rangelands 	Negative	3	4	2	3	12 Low
(e)	Poor drainage system	<ul style="list-style-type: none"> • Absence of well-designed drainage systems • Inundation in flood plains • Application of too much water in irrigated fields 	<ul style="list-style-type: none"> • Degradation of the environment • Salinization of irrigation fields • Water borne diseases • 	Negative	1	3	2	3	9 low
ii)	Effects on Ecosystems								
(a)	Habitat loss and biodiversity disturbances	<ul style="list-style-type: none"> ▪ Erection of infrastructure ▪ Presence of human beings (noise, vibrations from Agricultural activities) ▪ Chemical Contamination 	<ul style="list-style-type: none"> ▪ Forced migration of animals ▪ Destruction of flora and fauna ▪ Ecosystems imbalance 	Negative	2	3	3	5	13 Moderate

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT					
	CATEGORY	CAUSE	IMPACT	QUALITY	PROBABILITY	SEVERITY OR SIGNIFICANCE	EXTENT	DURATION	MAGNITUDE OF IMPACT
		of environment (soil, air and rivers)	<ul style="list-style-type: none"> ▪ Disturbance of migration by agricultural activities and possible forced migrations 						
(b)	Loss of Fragile Ecosystems	<ul style="list-style-type: none"> • Draining wetlands and floodplains to create arable land. • Unsustainably ploughing in the wetlands and floodplains. • Cultivating on steep slopes, mountain tops and river banks without adequate conservation measures. 	<ul style="list-style-type: none"> • Degradation of wetlands. • Erosion of mountain tops and sides • Loss of natural ecosystems 	Negative	4	5	5	5	19 High
(c)	Disturbance of marginal areas	<ul style="list-style-type: none"> • Establishing the projects in such areas poses serious threats of their further degradation. 	<ul style="list-style-type: none"> • Unsustainable extraction of materials from marginal lands • Avoid construction in marginal lands 	Negative	2	3	3	5	13 Moderate
(d)	Environmental Conservation Measures	<ul style="list-style-type: none"> • Bee keeping entails protection of vegetation for the bees to collect nectar. 	<ul style="list-style-type: none"> • environment protected and conserved • revegetation by planting required species 	Positive	4	3	4	4	15 (Moderate)
iii)	Pollutant Emissions								
(a)	Effluent and	<ul style="list-style-type: none"> ▪ Agricultural processes 	<ul style="list-style-type: none"> ▪ Pollution of soil and water 	Negative	4	3	2	2	11

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT					
	CATEGORY	CAUSE	IMPACT	QUALITY	PROBABILITY	SEVERITY OR SIGNIFICANCE	EXTENT	DURATION	MAGNITUDE OF IMPACT
	Solid waste	<ul style="list-style-type: none"> generating waste ▪ Spoils from road and infrastructure construction ▪ Waste generated at construction site camps and residential areas. 	<ul style="list-style-type: none"> resources ▪ Littering and indiscriminate dumping. ▪ Deterioration of the aesthetics of the areas. 						low
(b)	Ambient Air Quality	<ul style="list-style-type: none"> • Smoke emissions from processing plants using steam boilers, heating systems. • Drying processes produce dust. • Milling processes. • Pesticides used in pests and diseases control 	<ul style="list-style-type: none"> • Pollution of air • Increases in bronchial disorders • Impaired Visibility on the roads • Disturbs normal developments of vegetation • Causes acid rain 	Negative	2	2	3	3	10 (Low)
(c)	Ambient Water Quality (surface and ground water)	<ul style="list-style-type: none"> ▪ Waste generated from agricultural and livestock activities. ▪ Effluents from slaughter houses ▪ Effluents (drainage water) from agriculture land ▪ Effluents (drainage water) from agricultural produce processing ▪ Effluents (drainage water) 	<ul style="list-style-type: none"> ▪ Effluent pollutes soil and water resources ▪ Littering and indiscriminate dumping of solid waste pollutes land and water resources ▪ Poisoning of aquatic and inland ecosystems. ▪ Ecosystems imbalance and destruction of flora and fauna 	Negative	3 (groundwater) 4 (surface water)	5	2 (ground water) 4 (surface water)	4 (groundwater) 3 (surface water)	14 (Moderate)

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT					
	CATEGORY	CAUSE	IMPACT	QUALITY	PROBABILITY	SEVERITY OR SIGNIFICANCE	EXTENT	DURATION	MAGNITUDE OF IMPACT
		<p>from market places</p> <ul style="list-style-type: none"> ▪ Agro-chemicals run-off from the fields if not properly applied; ▪ Erosion processes introduce pollutants and particulates into the water. 	<ul style="list-style-type: none"> ▪ Loss of ordinary use of water. ▪ Treatment cost of the water become high. 						
(d)	Agro-chemicals Pollution	<ul style="list-style-type: none"> ▪ Limited knowledge of the poisonous nature of the chemicals. ▪ Accidental spillages. ▪ Poor disposal methods being employed. ▪ Washing of equipment in rivers. ▪ Poor application methods being used. ▪ Poor handling of the chemicals. 	<ul style="list-style-type: none"> ▪ Poisoning of farmers by chemicals. ▪ Poisoning of aquatic and inland ecosystems by the chemicals. ▪ Poisoning of the soil by the chemicals. ▪ Poisoning of farm products consumers by chemicals. 	Negative	5	5	4	3	17 High
iv)	Civil Works								
(a)	Climate resilient structures	<ul style="list-style-type: none"> • Extremes of climatic conditions. • Disasters such as earthquakes • Flooding 	<ul style="list-style-type: none"> • Deterioration of agriculture infrastructure • Destruction of infrastructure 	Negative	3	4	2	2	11 (low)

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT					
	CATEGORY	CAUSE	IMPACT	QUALITY	PROBABILITY	SEVERITY OR SIGNIFICANCE	EXTENT	DURATION	MAGNITUDE OF IMPACT
(b)	Brick Moulding and extraction of building materials	<ul style="list-style-type: none"> Melding of bricks Burning of bricks Sand and quarry stone for construction Timber for construction Gravel for road construction 	<ul style="list-style-type: none"> Scarring of the landscape due to sand mining and borrow pits. Deforestation 	Negative	4	3	3	2	12 (low)
(c)	Poor Workmanship	<ul style="list-style-type: none"> unqualified and inexperienced contractors use of sub-standard building material negligence on the part of contractors lack of close monitoring of projects 	<ul style="list-style-type: none"> poor structures cracking of buildings short life for infrastructure 	Negative	2	3	2	2	9 (low)
(d)	Water Quantity: -construction of irrigation systems and water supplies	<ul style="list-style-type: none"> potential changes in flow patterns Excessive abstraction of groundwater; Excessive abstraction of surface water; 	<ul style="list-style-type: none"> Negative impact on downstream users. Environmental flows affected Ecosystems imbalance and destruction of flora and fauna; Increased competition for water; Conflicts over water 	Negative	3	4	3	3	13 (Moderate)

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT					
	CATEGORY	CAUSE	IMPACT	QUALITY	PROBABILITY	SEVERITY OR SIGNIFICANCE	EXTENT	DURATION	MAGNITUDE OF IMPACT
			resources						
(e)	Temporary Visual Intrusion	<ul style="list-style-type: none"> Rehabilitation and upgrading of irrigation schemes, processing plants, warehouses, and other facilities. 	<ul style="list-style-type: none"> Change of the aesthetics of project area Scars from building material extractions. 	Negative	5	3	2	5	15 (Moderate)
v)	Agro Health								
(a)	Cattle disease	<ul style="list-style-type: none"> Outbreaks of diseases such as lumpy skin, East Coast, and Foot and Mouth. Lack of frequent dipping of cattle Lack of regular vaccination and immunisation of cattle 	<ul style="list-style-type: none"> Cattle deaths Banning of movement of cattle Loss of revenue due to stoppage of cattle sales 	Negative	3	4	4	3	14 (Moderate)
b)	Genetically Modified Agriculture	<ul style="list-style-type: none"> Experiments from research institutions Desire for better breeds 	<ul style="list-style-type: none"> Introduction of GMO food Unknown side effects from consumption of these GMO 	Negative	2	3	2	2	9 (low)

6.3.3 Social Impact Analysis

i. Coordination

A fragmented planning, implementation and monitoring approach at national, district and EPA level affects sustainability of a project. There may be some stakeholders at national and district level who are i) not aware ii) who doubt their role in the project and iii) who feel that their role is being played by another stakeholder. This results in uncertainties, suspicion and conflict. The following are recommendations on how best coordination can be done and the key aspects expected at all levels:

- a) Coordination mechanism must be in the project design and should be spelt out at inception stage outlining clear roles and responsibilities for each stakeholder. This must be a consultative exercise to allow dialogue especially where roles may seem to clash. For example, the role of Community Development department, Agri-Business department and project PMU on community mobilisation and training of FBOs must be spelt out. The Lead Agency (MoLGRD) and the PMU should lead this activity.
- b) Stakeholder mapping is a critical exercise that should be done and/or updated on a regular basis to allow new entries depending on the development of value chains and change in administrative Government structures. At national level, MoLGRD and the PMU should lead, and District level, the DPD and the PMU should be responsible.
- c) At national and district level, there must be strict regulation on stakeholder participation and the level/calibre of representation depending with the level required in each structure for example an officer being seconded to the Steering Committee where binding decisions are made or a student on attachment being seconded to the District Implementation team. MoLGRD and DPD should lead at national and district levels respectively with the help of the PMU.
- d) Coordination with service providers should be prioritised as they are the ones who work with the community. Community approaches need to be scrutinised and monitored but in dialogue format led by the PMU, MoLGRD and DPD
- e) There is need to resuscitate, strengthen and reformulate district and EPA structures that may be porous currently such as the DEC which is supposed to evaluate and guide service providers. Government must not be a spectator during project implementation but should play conductor and apprentice role at the same time. PMU, MoLGRD and DPD, DADO should lead the activity.
- f) Service Providers' implementation modalities need to be guided so that they do not end up interacting with community directly without the district's knowledge. Their MoUs should be clear on what they are expected and what they are going to deliver and how. This process should be led by the District Planning Department as the project implementation team leader.
- g) There is need for a dialogue at a higher Government level on allowances payable to Government officers when they accompany PMU or service provider into the field. The outcome of this discussion should be factored into the programme design and communicated accordingly. Failure to do this will seriously affect sustainability of the project and service providers will continue evading government officials. MoLGRD as the lead agency should facilitate this dialogue.
- h) There is need to ensure that there are adequate extension staff for all the value chains as they are the ones who interact with farmers on a day-to-day basis. The approach started under RLEEP to train non veterinary staff on basic principles of certain value chains should be intensified throughout the country. PMU should facilitate and assist Government to build its capacity within the implementation districts.

ii. Project design

- a) *Demand Driven Approach:* There is a risk for the programme that infrastructure and services may not be used beyond official programme period. Just 3 years after the RLEEP project, a number of infrastructures not being utilised were observed. There is need to strengthen the community demand driven approach where needs are identified at community level and communicated

upwards to the district through a project proposal and is awarded on a competitive basis in line with their capacity in terms of contribution to the project, solid management system and sustainability strategy. The Extension Officers in EPAs can play an important role in assisting communities with needs identification and proposal development. A leaf can be borrowed from what is happening in Lesotho

- b) *Community Development Life Cycle*: The challenge of most projects has been the tendency to 'projectise' communities and not allowing a full development life cycle to happen. This has resulted in high slippage rate, white elephants and continuous pumping of resources by the funding community. There is need to design the project with the fact that human development is not in tandem with project period. Four critical stages are inception, establishment, maturity and mitosis/segmentation (optional). Service providers should be capacitated likewise.
- c) *Dependency Syndrome*: The phenomena are still very strong among communities for example failing to procure consumables that would enable community to make use of infrastructure provided. This may be addressed in several ways (in no particular order) one of which is to use the demand driven approach explained above. Secondly there is need to create an open space dialogue with political players in the area to start spreading uniform messages to community on what should happen after the initial starter-pack. Thirdly there is need to educate communities on the importance of being self-sufficient and lastly to create awareness on the advantages/benefits of utilising the provided infrastructure (e.g. dipping cattle as compared to spraying).
- d) *Private Sector Focus*: Engagement of private sector should take cognisance of the fact that private sector's business approach is profit oriented and not people centred. Primarily, they do not have that developmental aspect required when working with communities. The moment they identify the next best opportunity they can just dump the community and leave. There is therefore need to build capacity of private sector in working with the community and in addition, it is important to make them understand what is required of them before signing an agreement. In any case the relationship should be made in a way that both community and the private sector will continue needing each other. There is need to set up structures that can continue supporting the initiatives.
- e) *Private Sector Monopoly*: Whilst it is necessary to protect the community, absence of competition in some cases results in complacency, unjustifiable prices and less focus on economic development especially when regulatory system is weak. TRADE can take lessons from RLEEP and open the market for private sector participation to a minimum permissible however and create a wider choice of commodity up-takers for farmers. This may be done in different districts.
- f) *Poor Road Network*: Poor road network to key facilities like warehouses, MBCs, markets etc. weakens the whole value chain. The majority of places visited away from the main tarred roads were in bad shape and are likely to become worse during rainy season. Where rehabilitation was done previously, there was poor maintenance system. Some areas did not have a single club, some had but not active while some clubs were active but did not have requisite materials. There is need to invest more resources on road rehabilitation and maintenance systems. A monitoring mechanism must be put in place at community and at district level.

iii. Sustainability of Agri-Business

TRADE will work through FBOs such as clubs, associations and cooperatives with the objective of enabling them to become commercial entities to effectively support smallholder producers

- a) *Elitist Community Business Plans*: Development of business plans is a very good approach but it is necessary for the plans to be generated by the communities themselves not as ambitious ideas from extension officers and/or politicians. Ownership starts from the base processes.
- b) *Frosty farmer-buyer relationship*: Trust and understanding of each other's needs are critical elements for successful relationship between producers and next value chain players (aggregators/vendors/traders). There is need to intensify the open space dialogue between the

various entities for a sustainable value chain. This would create opportunities for improvement of farm processes (quality and quantity) and allow for fair prices that fully compensate farmers' efforts but also fair enough for the buyer to sell or process at a good profit margin. Timing of these dialogues is equally important.

- c) *FBOs paying more attention on Diversification:* All the cooperatives in existence at the moment are trying to diversify from the mainline business with the hope that they will be able to realise more income and be self-sufficient. Whilst this makes sense economically, technically it does not. The value chain concept is to allow different players take part in the value chain according to their capabilities and comparative advantages. There is need to provide adequate knowledge from the onset of the programme but more so assist the different value chain players to make most of their disposable resources. All things being equal, farmers are not poor because they are not processing, but because they are failing to negotiate for a fair price with the buyers. The roadmap should be clear from the business plan.
- d) *Value Addition challenges:* If the programme design prefers to go ahead with assisting FBOs with value addition, there is need for updated skills and knowledge pertaining to the particular value chain, infrastructure and adequate capacity to meet the required standards. There is also need for high level business management skills training.
- e) *Failure to meet National Standards:* There are some cooperatives who have already ventured into processing but all of them are struggling in terms of meeting required standards. The current relationship between FBOs and the MBS is more punitive than development oriented. There is need to decentralise the functions of the MBS to allow interaction and support to FBOs through participatory assessments, dialogue, coaching and mentorship.

iv. **Participation and Leadership**

- f) *Poor Leadership quality:* Selection and/or voting of members of the executive should not be done based on patronage, fear or intimidation. There is need for set guidelines with minimum requirements for each position which all group members must be aware of before selecting their leaders. Motivation or demotivation for both old and new members come from the leadership
- g) *Active Participation:* By default, majority cooperative membership are women but the phenomenon observed around the country in all income generating cooperatives is that the executive is dominated by men. Youths are given a more operational role where their skills and energy are most useful especially in processing. There is need to promote good gender relations in FBOs to effectively allow equal participation, management of resources and benefits therefrom. Conscious efforts should be made to propel women not only to be in the executive but occupy influential positions. The efforts must be cognisant of the fact that women maybe be failing to lead because of their traditional position in society and low levels of education.
- h) *Empowerment of Women:* The country is a combination of matriarchal and patriarchal systems but in-depth analysis showed that women have no control over land either way. Whilst they are guaranteed of access to land, it is the men who usually makes decision on commodity choice and who becomes very active in the post-harvest period resulting in increase in gender-based violence cases. There is need to facilitate good gender relations at household level and promote fair sharing of labour and benefit therefrom. For example, the zero grazing approach is labour intensive as a lot of effort is required to feed and water the cow(s) on top of other nurturing requirements. There is also need to promote women in traditionally male dominated value chains such as honey and beef production.
- i) *Empowerment of Youths:* The majority of Youths in Malawi do not own land hence their low participation in agriculture. However, the value chain model being promoted provides an opportunity for them to participate gainfully in some stages of the value chain as aggregators, vendors, traders and/or processors. Everyone has a niche in a value chain.

- j) *Elite Capture*: There is a risk of having a few individuals running the FBOs using donated infrastructure and services as a personal business because they have an upper hand in terms of position in society, educational or economic status. There is need to protect the community and build capacity needed to identify such practices and how to counter them.

v. Information, Knowledge and Skills

- a) *Low Quality and Quantity Production*: There are high chances of farmers resorting short cuts as they fail to secure required inputs especially production enhancements resulting in poor quality product. For example, the beef service provider had to withdraw their bulls under the previous pass-on scheme because the farmers were failing to take care of the bulls and the calves. Local restaurant potato users shun buying from small scale farmers because the size was too small for potato chips/fries. In terms of quantity, there is need for effective farming methods and good planning beforehand. There is need to raise awareness, educate and mentor farmers on good husbandry and cropping and demonstrate the benefit cost. This will help farmers who feel that buying dipping chemical (Acaricide) is too expensive whilst their cattle is failing to fetch a good price at the market.
- b) *Low Nutrient consumption*: High levels of malnutrition rate show that communities do not consume what they grow. Mchinji district for example which is considered the food basket of the country has the highest stunting levels at 44%. There is need to integrate nutrition uptake in all value chains through nutrition education, promotion of bio-fortified supplementary crops, facilitate food fairs where FBOs from different value chains can interact and exchange nutritional best practices. Water, Sanitation and Hygiene are closely linked to nutrition and therefore must be integrated within. Warehouses may also be used as grain banks where farmers will be encouraged to store grain for food during 'dry times'.

vi. Socio-Economic Development and Transformation

- a) *Failure to service loans*: This is a huge risk observed in all the cooperatives visited. Farmers are indebted to either commercial banks or their FBOs from farm inputs loans. However, the capacity to pay back the money with interest and being able to have surplus for home use is very low. The concept of transformation becomes too theoretical as farmers continues to be tied to lending institutions hence the high default rate among them, leaving the FBOs to bear the brunt. There is need to identify a viable model to assist the farmers that will leave them better off at the end.
- b) *Porous Safety Nets*: A number of FBO farmer members rely of rain-fed agriculture. Others are engaged in seasonal activities such as honey farming which does not thrive when there is no nectar. There is also the risk of losing crops due to droughts or floods which leave farmers dry. In most cases these farmers will be servicing input loans either from the bank or their cooperative. There is therefore need for a fall-back plan so that farmers do not slide back into poverty. There is need to identify together with the farmers in their locality alternative livelihoods that the farmers can engage in.
- c) *Poor Operation and Maintenance*: Poor FBO organisation may result in weak operation and maintenance of infrastructure. There is also the risk of vandalism as a result of failure to secure assets. A sustainable O&M system should be part of the project design and agreed upon before community is assisted from outside. It is important that community receives training in business management, O&M, leadership, and community dynamics to be able to mobilise and motivate each other.
- d) *Village Saving and Lending Schemes*: Chances of this scheme failing are high if communities fail to grasp the concept or if inadequate or inaccurate information is given. Communities are not keen on borrowing from the scheme because without any income generating project, they will not be able to pay back plus interest charged when they borrow. There is need to reconceptualise the

VSL approach taking into cognisance the local realities of the farmers. A learning visit to some thriving communities can be of great assistance.

- e) *Poverty Mentality*: There is a tendency of farmers to believe that they are poor whilst they have adequate resources that they can utilise. Cattle in Malawi is used as a status symbol while the owner begs for donor assistance. There is need to raise awareness and educate farmers how to convert existing resources into a business that generates money and how to run it.
- f) *Child Labour*: Open grazing has an effect on school going children as they are the ones mostly tasked to look after the cattle. There is need to involve community leadership and raise awareness on child labour and the implications thereof.
- g) *Socio-economic Dilemma*: Many projects may be implemented but if there is a systemic failure to manage the economic gains, households will not really transform. This will result in conflict and gender-based violence. *In addition*, the improved economic status has become a major HIV/AIDS driver as men engage in extra-marital affairs. There is need for the project to have a social management package to support farmers cope with the transition from poverty to economic freedom

vii. Social Amenities

- a) *Water, Sanitation and Hygiene*: It was noted that on all infrastructure that was provided for although toilets were included, there are no hand washing facilities in the form of running water and soap to prevent diseases and food contamination. There is need to make sure that food handlers (for both processed and unprocessed) maintain high level of hygiene. Women on the other hand must feel free to be at the markets, warehouses and dip tanks knowing that there are all weather sanitary facilities to cater for their special needs.
- b) *Cattle Khola*: For security purposes and for lack of space, the kholas are usually sited within household dwellings which compromises hygiene as the cow dung smell attracts disease carrying flies which affects personal health. This also affects quality of milk depending on how it is handled before transportation to MBCs. There is need for regular health and hygiene awareness programmes among farmers. These can be done at the MBC as farmers bring their milk.
- c) *Occupational Health and Safety Issues*: Weak technical capacity and/or negligence on operation of vehicles and machinery resulting in temporary and permanent physical injuries, Bronchial diseases from dust, diseases and illness from livestock handling (milk production, slaughter houses) and/or loss of life.

6.3.4 Magnitude of Potential Social Impacts

Table 6-5 Magnitude of Potential Social Impacts

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT				
	CATEGORY	CAUSE	IMPACT	PROBABILITY	SEVERITY OR SIGNIFICANCE	SCALE	DURATION	MAGNITUDE OF IMPACT
5.6.1	PLANNING PHASE							
	Fragmented project approach	<ul style="list-style-type: none"> Poor stakeholder mapping Unclear roles and responsibilities Suspicion of new project approaches/methodology Poor project Inception/Introduction Inadequate dissemination/sharing of information 	<ul style="list-style-type: none"> Limited Stakeholder Involvement Low chances of success and sustainability Failure to take up ownership of the project Limited cooperation - Suspicion and hence concealing important of information 	4	5	5	5	19 (High)
	Dependency Syndrome	<ul style="list-style-type: none"> Inappropriate community entry approach Failure to carry out needs assessment for potential beneficiaries Using purely top-down/donor driven approach 	<ul style="list-style-type: none"> Lack of ownership Underutilised infrastructure and services No sustainability 	5	5	5	5	20 (High)
	Disregard of community development life cycle	<ul style="list-style-type: none"> Inadequate resources for holistic community development Inadequate capacity of service providers 	<ul style="list-style-type: none"> Failure to mature High slippage rate Frustrated community Overwhelmed but incapacitated communities 	3	5	5	4	17 (High)
CONSTRUCTION PHASE								

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT				
	CATEGORY	CAUSE	IMPACT	PROBABILITY	SEVERITY OR SIGNIFICANCE	SCALE	DURATION	MAGNITUDE OF IMPACT
	Land Acquisition for FBOs	<ul style="list-style-type: none"> Assumptions - failure to follow due process Coercion in order to get access to privately owned land for project expansion 	<ul style="list-style-type: none"> Conflict between FBOs and community 	3	5	4	3	15 (Moderate)
	Disruption of access ways and mobility	<ul style="list-style-type: none"> Establishment of projects across usual routes e.g. Warehouses 	<ul style="list-style-type: none"> Usual routes closed. Long routes in use - women, the elderly and school children affected. 	3	4	3	4	14 (Moderate)
	Disputes over water resources	<ul style="list-style-type: none"> Limited water quantity and quality Water not properly allocated between upstream and downstream farmers and livestock keepers Over abstraction of water by certain farms Denial of access to water for livestock in favour of cultivation 	<ul style="list-style-type: none"> Conflicts over water allocations. Reduced production 	3	5	5	4	17 (High)
	Social disturbances	<ul style="list-style-type: none"> Presence of contract workers from outside the area and interaction with locals Influx of people to the areas in search of employment opportunities. 	<ul style="list-style-type: none"> Social conflicts Spread of communicable diseases such as HIV/AIDS 	4	5	5	3	17 (High)
	Occupational Health and Safety Issues	<ul style="list-style-type: none"> Weak technical capacity and/or negligence on operation of vehicles and machinery Lack or inadequate use of safety 	<ul style="list-style-type: none"> Temporary and permanent physical injuries Bronchial diseases from dust. 	4	5	5	3	17 (High)

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT				
	CATEGORY	CAUSE	IMPACT	PROBABILITY	SEVERITY OR SIGNIFICANCE	SCALE	DURATION	MAGNITUDE OF IMPACT
		gear may also contribute to accidents that may result in trauma and other casualties.	<ul style="list-style-type: none"> • Diseases and illness from livestock handling (milk production, slaughter houses) • Loss of life 					
	Impacts of Construction on local people	<ul style="list-style-type: none"> • Noise and vibrations during works. • Spillages and dust during transportation of materials. • Falling from tripping on building materials. • Falling or flying debris. 	<ul style="list-style-type: none"> • Temporary and permanent physical injuries • Bronchial diseases from dust. • Loss of life • Cracking of existing structures from vibrations. 	3	4	4	2	13 (Moderate)
	Civil Works	<ul style="list-style-type: none"> • Disregarding of construction regulations • Doing shortcuts 	<ul style="list-style-type: none"> • Substandard infrastructure that is not sustainable • structure that cannot withstand extreme weather events and climate change 	5	5	5	4	19 (High)
		•	•					
OPERATION PHASE								
	Failure of Private sector to develop community	<ul style="list-style-type: none"> • Primary objective of private sector • Unclear terms of engagement with private sector • Failure to protect the community 	<ul style="list-style-type: none"> • Frustrated and used communities • Broken trust for future engagement 	4	5	4	4	17 (High)
	Private sector Monopoly	<ul style="list-style-type: none"> • Failure to open up the playing field 	<ul style="list-style-type: none"> • Unjustifiable price hikes 	3	4	4	2	13 (Moderate)

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT				
	CATEGORY	CAUSE	IMPACT	PROBABILITY	SEVERITY OR SIGNIFICANCE	SCALE	DURATION	MAGNITUDE OF IMPACT
			<ul style="list-style-type: none"> • Unfavourable operating conditions for farmers 					
	Poor Road Network	<ul style="list-style-type: none"> • Ineffective road maintenance clubs • Lack of monitoring • Inadequate road maintenance materials 	<ul style="list-style-type: none"> • Limited market linkage 	4	5	4	4	17 (High)
	Elitist Community Business Plans	<ul style="list-style-type: none"> • Extension Officers imposing their ideas in business plans • Inadequate capacity among FBOs 	<ul style="list-style-type: none"> • Lack of ownership • Addressing of wrong or insignificant gaps 	3	5	3	1	12 (Moderate)
	Frosty Farmer-buyer relationship	<ul style="list-style-type: none"> • Lack of understanding of each player's needs • Absence of dialogue platform 	<ul style="list-style-type: none"> • Mistrust and suspicion 	5	5	5	3	18 (High)
	FBOs paying more attention on Diversification	<ul style="list-style-type: none"> • Misconception of the value chain concept • Failure to maximise production • Belief that diversification is the missing link to get themselves out of poverty 	<ul style="list-style-type: none"> • Failure for business to take off • Frustration when things do not go according to plan • Failure to pay huge loans taken from the bank 	3	4	4	2	13 (Moderate)
	Value Addition challenges	<ul style="list-style-type: none"> • Inadequate capacity (skills and financial resources) • Inadequate infrastructure • Lack of high-level business management skills 	<ul style="list-style-type: none"> • Failure of business to take off and/or thrive 	3	4	4	2	13 (Moderate)
	Meeting National Standards	<ul style="list-style-type: none"> • No decentralised structures for MBS 	<ul style="list-style-type: none"> • Production of sub-standard products 	4	5	4	3	16 (High)

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT				
	CATEGORY	CAUSE	IMPACT	PROBABILITY	SEVERITY OR SIGNIFICANCE	SCALE	DURATION	MAGNITUDE OF IMPACT
		<ul style="list-style-type: none"> No coaching and mentorship for farmers No essential skills and technology 	<ul style="list-style-type: none"> Rejection of the processed product Failure to reach wider market 					
	Poor leadership quality in FBOs	<ul style="list-style-type: none"> Voting based on politics of patronage Lack of leadership skills 	<ul style="list-style-type: none"> Demotivation of farmer members High membership turnover Corruption Constant unproductive conflicts 	4	5	4	4	17 (High)
	Less women in leadership positions	<ul style="list-style-type: none"> Domination by men in thriving value chains and FBOs Inferiority complex due to culture and tradition Failure of women to amplify their voices Low education levels 	<ul style="list-style-type: none"> Discrimination and oppression of women Perpetuation of gender inequalities in FBOs 	4	5	4	4	17 (High)
	Low youths participation	<ul style="list-style-type: none"> No ownership and control of productive resources 	<ul style="list-style-type: none"> High unemployment rate Failure to build future agriculture base 	4	5	4	4	17 (High)
	Elite capture	<ul style="list-style-type: none"> Exploitation of unsuspecting FBO members 	<ul style="list-style-type: none"> Enrichment of individuals at the expense of others 	3	4	4	3	14 (Moderate)
	Low Quality and quantity Production	<ul style="list-style-type: none"> Inability to afford farm input requirements Low knowledge levels effective farming methods Poor planning 	<ul style="list-style-type: none"> Rejection of produce Produce fetching low prices Low income ad compared to labour input 	4	5	5	5	19 (High)

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT				
	CATEGORY	CAUSE	IMPACT	PROBABILITY	SEVERITY OR SIGNIFICANCE	SCALE	DURATION	MAGNITUDE OF IMPACT
		<ul style="list-style-type: none"> Inadequate extension services 						
	Low Nutrient consumption	<ul style="list-style-type: none"> Low prioritisation of good health and wellness Low nutrition education 	<ul style="list-style-type: none"> High malnutrition and stunting levels Exposure to diseases 	4	5	5	4	18 (High)
	Failure to service loans	<ul style="list-style-type: none"> Bad agricultural season High interests rate not in tandem with what farmers get Lack of discipline 	<ul style="list-style-type: none"> Cyclical poverty 	3	4	4	4	15 (High)
	Porous Safety Nets	<ul style="list-style-type: none"> Reliance on rain fed agriculture Seasonality of some value chains Absence of back-up plan 	<ul style="list-style-type: none"> Sliding back into poverty Failure to bounce back in the next season 	3	3	4	3	13 (Moderate)
	Poor Operation and Maintenance	<ul style="list-style-type: none"> Lack of ownership appreciation Misuse or inability to use Infrastructure Lack of training in the use of new technology Absence of user manual and Standard Operation Procedures (SOPs) 	<ul style="list-style-type: none"> Unsustainability of systems Failure to derive intended value from the infrastructure and equipment Vandalism/Damage to infrastructure and equipment 	5	5	4	4	18 (High)
	Low success rate of VSL Schemes	<ul style="list-style-type: none"> Wrong conception of VSL approach Inaccurate information Lack of investment avenues 	<ul style="list-style-type: none"> Community not borrowing from the scheme Economic hardships during off season periods 	3	4	4	3	14 (Moderate)

REF:	PARAMETER UNDER CONSIDERATION			CRITERIA FOR ASSESSMENT OF POTENTIAL IMPACT				
	CATEGORY	CAUSE	IMPACT	PROBABILITY	SEVERITY OR SIGNIFICANCE	SCALE	DURATION	MAGNITUDE OF IMPACT
	Poverty Mentality	<ul style="list-style-type: none"> • Dependency syndrome • Low levels of education • Lack of business knowledge 	<ul style="list-style-type: none"> • Failure to convert existing resources into viable business • Economic hardships 	4	5	4	3	16 (High)
	Child Labour	<ul style="list-style-type: none"> • Intensification of open grazing cattle farming • Low priority on children's education 	<ul style="list-style-type: none"> • Exploitation of school going children 	5	5	4	4	18 (High)
	Socio-economic dilemma	<ul style="list-style-type: none"> • Failure to manage economic well-being and social life 	<ul style="list-style-type: none"> • High HIV/AIDS Incidence Rate • Increase of Gender Based Violence cases (4	5	4	4	17 (High)
	Water, Sanitation and Hygiene	<ul style="list-style-type: none"> • Lack of knowledge on good WASH standards and practices • Low prioritisation of WASH • Low prioritisation of special gender WASH needs at communal places 	<ul style="list-style-type: none"> • Spread of communicable diseases especially diarrhoeal related • Poor quality products e.g. milk, honey, • Burden on women and girls 	5	5	4	4	18 (High)
	Cattle Khola	<ul style="list-style-type: none"> • Cow dung smell that attract flies around the home 	<ul style="list-style-type: none"> • Poor home hygiene • Spread of communicable diseases especially diarrhoeal related 	4	4	4	4	16 (High)

7. THE ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

7.1 GENERIC ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN.

The purpose of the Environmental and Social Management Plan (ESMP) is to identify environmental and social impacts/enhancements, mitigation measures to be undertaken and the institutional responsibilities for: (i) the identification of environmental and social impacts; (ii) the preparation and implementation of mitigation measures; (iii) monitoring the implementation of the mitigation measures; and (iv) capacity building to ensure the aforementioned responsibilities will be carried out effectively.

The following is a generic environmental and social management plan, which can be used in the implementation of any of the sub-projects.

7.2 THE ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

Table 7-1 The Environmental and Social Management Plan

TEXT REF.	IMPACT	MITIGATION/ENHANCEMENT	RESPONSIBILITY	CAPACITY BUILDING
7.2.1 Environmental Impacts				
i)	Environment Degradation			
(a)	Drought/Floods			
	<ul style="list-style-type: none"> • Climatic extremes affecting agricultural activities • Lack of water for agricultural activities • Inundation of crops in the rain season • Causing food shortages 	<ul style="list-style-type: none"> • Develop reliant alternative sources of water for the crops or animals so as not to depend on rainwater • Limit cultivating in flood plains in areas prone to flooding • Cultivate drought resistant/tolerant crops in drier areas and rice in wetter areas. • 	GoM, Contractors, Project staff, District Agric. Officers, District Assemblies	Climate Smart agriculture
(b)	Destruction of Vegetation			
	<ul style="list-style-type: none"> • Vegetation clearing of project sites may occur during rehabilitation/construction of irrigation and value addition infrastructure. • Over abstraction of resources may occur for construction purposes. • Sensitive habitats may be affected as materials are sought, e.g. Grass from wetlands. 	<ul style="list-style-type: none"> • preservation of protected plant species, • use of alternative sources of energy, • use of environmentally friendly technologies, • awareness campaigns • Sensitive habitats should be avoided. • Clearing should be limited to working areas only. • Revegetation and reforestation must be prioritized. • Over abstraction of construction materials should be avoided. • Habitat restoration must be done where effects have been caused. • Sustainable catchment management must be practiced 	GoM, Contractors, Project staff, District Agric. Officers, District Assemblies	Environmental awareness training
(c)	Soil and land degradation			
	<ul style="list-style-type: none"> • Point source contamination from diesel, lubricants etc around working areas. 	<ul style="list-style-type: none"> • Stabilization of loose soil, • controlled excavation, 	GoM Contractors, Project staff, District Agric Officer,	Environmental awareness training

TEXT REF.	IMPACT	MITIGATION/ENHANCEMENT	RESPONSIBILITY	CAPACITY BUILDING
	<ul style="list-style-type: none"> Increased soil erosion due to vegetation clearing, soil trampling and compaction. Increased rapid runoff due to vegetation clearing and soil compaction diminishing infiltration capacity. Deterioration of soil characteristics due to increased erosion. 	<ul style="list-style-type: none"> preservation of vegetation cover, controlled transportation of raw materials, Appropriate landscaping. Appropriate containment measures for all operational areas and proper disposal of used lubricants. Soil erosion control measures (e.g. re-vegetation, reseeding of grasses, land preparation, terracing, use of gabions, etc) Restoration of borrow pits, sand and quarry stone abstraction sites and brick moulding sites. 	Forestry Department, District Assemblies	
(d)	Environment nuisance	<ul style="list-style-type: none"> 		
	<ul style="list-style-type: none"> Free roaming Livestock damaging the rangelands, fields and gardens Destruction of natural features, crops and gardens Overgrazing the rangelands 	<ul style="list-style-type: none"> Practice zero grazing (Khola) system Grow fodder to feed the livestock Limit the numbers of animals to sustainable numbers Raise better Breeds of livestock geared for business and not prestige. 	Project management, District Agric. Officer, NGOs and District Assemblies	Better livestock management practices.
(e)	Poor drainage system	<ul style="list-style-type: none"> 		
	<ul style="list-style-type: none"> Absence of well-designed drainage systems Inundation in flood plains Application of too much water in irrigated fields Degradation of the environment Salinization of irrigation fields Water borne diseases 	<ul style="list-style-type: none"> Construct well designed drainage systems Practice well designed application of irrigation waters Avoid standing pools of water which introduce water borne diseases Avoid cultivation in flood prone floodplains Encourage organic farming, limit the use of agro-chemicals and provide water management training to farmers institute good drainage all over the scheme allow for the leaching fraction when applying water in the fields know the salinity status of soils Avoid establishing irrigation and value addition infrastructure in flood plains, wetlands or areas prone to periodic flooding. reforestation and proper catchment management in the hinterland of the irrigation schemes Erection of flood control structures 	Project management, District Agric. Officer, NGOs and District Assemblies	Water resources management practices.

TEXT REF.	IMPACT	MITIGATION/ENHANCEMENT	RESPONSIBILITY	CAPACITY BUILDING
ii)	Effects on Ecosystems			
a)	Habitat loss and biodiversity disturbances	•		
	<ul style="list-style-type: none"> Forced migration of animals Destruction of flora and fauna Ecosystems imbalance Disturbance of migration by agricultural activities and possible forced migrations 	<ul style="list-style-type: none"> Limit noise and vibrations which can irritate animals Preserve and conserve flora and fauna to maintain the ecosystem Avoid known migration route to allow animals to continue with their life without conflicts 	Contractors, Project Management, District, Forestry Department, District Assemblies	
b)	Loss of fragile ecosystems	•		
	<ul style="list-style-type: none"> Establishment of scheme or Value addition infrastructure in flood plain Establishing a scheme or Value addition infrastructure on marginal lands Establishing a scheme or Value addition infrastructure on steep slopes 	<ul style="list-style-type: none"> Conduct feasibility studies before construction, use expert knowledge of ecologists, introduction of ecosystem conservation projects, fencing carry out conservation works institute flood control system reforestation of the catchment area 	Contractors, Project Management, District, Forestry Department, District Assemblies	
(c)	Disturbance of marginal areas			
	Establishing the projects in such areas poses serious threats of their further degradation.	<ul style="list-style-type: none"> Avoid extraction of raw materials from marginal areas, No construction of structures in marginal areas. 	PROJECT MANAGEMENT, NGOs and beneficiaries	
(d)	Environmental Conservation Measures	•		
	<ul style="list-style-type: none"> Bee keeping entails protection of vegetation for the bees to collect nectar environment protected and conserved revegetation by planting required species 	<ul style="list-style-type: none"> institute environmental conservation in the surrounding area of operations plant flowering trees to provide nectar for the bees revegetate areas that have been cleared 	Project management, District Agric. Officer, Beneficiaries	Bee keeping technics
iii)	Pollutant Emissions	•		
(a)	Effluent and Solid waste	•		
	<ul style="list-style-type: none"> Most agricultural, agro-industries, packaging and marketing operations produce solid waste. <ul style="list-style-type: none"> Washing in agro-processing facilities Washing and pressing out of water from produce, like cassava Steam and hot water boilers produce ash 	<ul style="list-style-type: none"> Controlled disposal of wastes and effluent by use of appropriate disposal facilities, use of appropriate drainage structures, use of cleaner technologies, proper storage of materials, awareness campaigns Seek guidance of local environmental officers to identify 	Contractors, project management, District Agric. Officer Local Environmental Officer.	Likely hazardous and non-hazardous construction waste

TEXT REF.	IMPACT	MITIGATION/ENHANCEMENT	RESPONSIBILITY	CAPACITY BUILDING
	<ul style="list-style-type: none"> - Fresh food and processed food markets, waste from canning - Excess produce at markets 	<ul style="list-style-type: none"> • acceptable disposal sites. • Waste from agricultural activities can be further processed into other uses, e.g. organic manure. • Reuse and recycling must be preferred over disposal of the waste. 		
(b)	Ambient Air Quality	•		
	<ul style="list-style-type: none"> • Air Quality will be impacted by emission waste from land preparation, drying of produce, processing of produce and processing waste from the packaging process. • Air Quality will be impacted by emissions from vehicles, earthmoving equipment and released particulate matters. • Infrastructure construction will lead to considerable levels of dust which can affect workers and the public. • Burning of agro-processing waste, like rice husks. • Milling and other agro-processes will generate dust. 	<ul style="list-style-type: none"> • Waste from value addition processes must be handled properly to avoid smell. • Contractors should use dust screens or nets in windows, doorways and ventilators of rooms where demolition or other dusty construction activities are occurring. • Dust suppression measures must be instituted at all sites, like spraying of water. • Produce organic manure from agro processing waste • Install dust extractors at processing plants. • Provide workers with adequate PPE, like dust musks, etc 	Project Management and Contractor	None
(c)	Ambient Water Quality (surface and ground water)	•		
	<ul style="list-style-type: none"> • Water quality will be impacted by wastewater discharges from construction activities including onsite sewage and rainwater run-off. • Soil and water pollution resulting from the accumulation of solid and liquid waste. • Soil and water pollution from chemicals, & pesticides meant for production. • Water quality may be impacted by waste streams from processing plants. • Fertiliser and biocides may be washed into the water bodies if not correctly applied. • Stagnant pools in the scheme • People washing in the canals 	<ul style="list-style-type: none"> • Contractors to erect proper sanitary facilities. • Pollution from lubricants and other wastes to be avoided. • Controlled disposal of wastes and effluent by use of appropriate disposal facilities, use of appropriate drainage structures, use of cleaner technologies, proper storage of materials, awareness campaigns • Waste must be recycled and reused to avoid dumping in waterways. • Encourage proper application of chemicals, in terms of quantities, timing and location. • Construct wash points away from the canals • Concrete lining and good maintenance of canals 	Project Management and Contractor, District Agric. Officer	None
(d)	Agro-chemicals Pollution	•		

TEXT REF.	IMPACT	MITIGATION/ENHANCEMENT	RESPONSIBILITY	CAPACITY BUILDING
	<ul style="list-style-type: none"> Use of pesticides may increase better yields, control pests and diseases. This can then expose the farmers to these toxic chemicals Use of Inorganic Fertilisers Poor storage, handling and disposal of empty containers. Poor application, in terms of quantities, timing and location of the chemicals 	<ul style="list-style-type: none"> Encourage organic farming Encourage, limited and proper use and handling of chemicals. Conduct awareness training & workshops on safe handling of chemicals. 	GOM, Ministry of Agriculture, Scheme Management Committee	
iv)	Civil Works	•		
(a)	Climate resilient structures	•		
	<ul style="list-style-type: none"> Extremes of climatic conditions. Disasters such as earthquakes Flooding Deterioration of agriculture infrastructure Destruction of infrastructure 	<ul style="list-style-type: none"> Develop strong and resistant designs that can withstand shocks Construct structures that can withstand flooding Carry out planned maintenance of agriculture infrastructure to ascertain its durability 	GOM, Ministry of Agriculture, Scheme Management Committee Management and Contractor, District Agric. Officer	Planned maintenance approaches
(b)	Brick Moulding and extraction of building materials	•		
	<ul style="list-style-type: none"> Melding of bricks Burning of bricks Sand and quarry stone for construction Timber for construction Gravel for road construction Scarring of the landscape due to sand mining and borrow pits. Deforestation	<ul style="list-style-type: none"> Adopt concrete blocks Use blue gum trees for burning kilns Rehabilitate landscape after extracting building materials Revegetate to compensate for trees used for firewood 	Project Management and Contractor, District Agric. Officer	
(c)	Poor Workmanship	•		
	<ul style="list-style-type: none"> poor structures cracking of buildings short life for infrastructure 	<ul style="list-style-type: none"> contract qualified and experienced contractors insist on the use of good quality building materials hold any contractor responsible for any negligence conduct periodic monitoring of the construction sites	Project Management and Contractor, District Agric. Officer	Contract Management
(d)	Water Quantity: -construction of irrigation systems and water supplies	•		
	<ul style="list-style-type: none"> Negative impact on downstream users. Environmental flows affected Ecosystems imbalance and destruction of flora and fauna; Increased competition for water; 	<ul style="list-style-type: none"> Properly determine the amount of water for the particular scheme Allow for environmental flows Determine the proper yields of borehole and calculate the amount of water that can be abstracted without affecting the system. Share water equitably with the rest of the users in the system. 	Project Management and Contractor, District Agric. Officer	Water resources Management.
(e)	Temporary Visual Intrusions			

TEXT REF.	IMPACT	MITIGATION/ENHANCEMENT	RESPONSIBILITY	CAPACITY BUILDING
	Rehabilitation/construction of Irrigation and value addition infrastructure will change the characteristics of the area and leave a marred landscape.	<ul style="list-style-type: none"> Contractor should ensure minimum footprint of construction activities and provide decent accommodation for workers. All altered landscapes (Sand pits, borrow pits, brick moulding sites etc) should be rehabilitated by the contractor. 	Project Management and Contractor, District Agric. Officer	none
v)	Agro Health	•		
(a)	Cattle disease	•		
	<ul style="list-style-type: none"> Cattle deaths Banning of movement of cattle Loss of revenue due to stoppage of cattle sales 	<ul style="list-style-type: none"> Monitor livestock against any disease outbreaks Vaccinate livestock timeously Dip livestock frequently to rid them of ticks and other pests. 	GOM, Ministry of Agriculture, Scheme Management Committee Management and Contractor, District Agric. Officer	
b)	Genetically Modified Agriculture	•		
	<ul style="list-style-type: none"> Introduction of GMO food Unknown side effects from consumption of these GMO 	<ul style="list-style-type: none"> Guard against the random introductions of GMO into the food chain 	GOM, Ministry of Agriculture, Scheme Management Committee Management and Contractor, District Agric. Officer	
7.2.2 Social and Health Impacts				
	Fragmented project approach			
	<ul style="list-style-type: none"> Limited Stakeholder Involvement Low chances of success and sustainability Failure to take up ownership of the project Limited cooperation - Suspicion and hence concealing important of information 	<ul style="list-style-type: none"> Conduct a comprehensive participatory stakeholder mapping exercise Outline roles and responsibilities at national, district and EPA level Put in place a strict regulation governing stakeholder participation in terms of the level/calibre of representation in all project committees at national, district and EPA There is need for coordination with service providers and to guide them on implementation methodologies and modalities There is need to resuscitate, strengthen and/or reformulate district and EPA development structures and give them 'teeth that bite' There is need for dialogue at a higher Government level regarding allowances payable to civil servants on project duty. Ensure adequate Extension staff for all the value chains 	MoLGRD, MoAIWD, PMU, DEC, District Implementation Team	Stakeholder strengthening and Team Building

		<ul style="list-style-type: none"> Timeously dissemination of information 		
	Dependency Syndrome			
	<ul style="list-style-type: none"> Lack of ownership Underutilised infrastructure and services No sustainability 	<ul style="list-style-type: none"> Use demand driven approach where communities have to request for assistance on a competitive basis There is need to create an open space dialogue with political players in the area to start spreading uniform messages of self-sustenance There is need to educate communities on the importance of being self-sufficient <p>Create awareness and demonstrate advantages/benefits of utilising the infrastructure and services and cost of not doing so</p>	PMU, MoAIWD, DEC, District Implementation Team, Community leadership	Demand Driven Approaches, Cost Benefit Analysis
	Disregard of community development life cycle by Service Providers			
	<ul style="list-style-type: none"> Failure of community to mature High Slippage rate Frustrated community Incapacitated communities (white elephants) Continuous pumping of resources by the funding community 	<ul style="list-style-type: none"> Project design must factor in the full human development cycle (inception, establishment, maturity and/or mitosis/segmentation) Service providers and Government departments should be capacitated in the same manner. Contracts with service providers must reflect Government expectations with clear verifiable monitoring indicators 	MoLGRD, MoAIWD, MPU, Service Providers	Human Development Cycle and the link with TRADE
	Land Acquisition for FBOs			
	<ul style="list-style-type: none"> Conflict between FBOs, Traditional leadership and community 	<ul style="list-style-type: none"> There must be a willing buyer and willing seller situation If land is being donated by traditional leadership, proper documentation must be prepared If a member of the FBO is donating his/her land, proper documentation outlining terms of donation must be prepared 	PMU, DEC, EPA, Service Provider	Conflict Resolution in Development
	Disruption of access ways and mobility			
	<ul style="list-style-type: none"> Usual routes closed. Long routes in use - women, the elderly and school children affected. 	<ul style="list-style-type: none"> Minimise disruption as much as possible and give information Engage in good designs (warehouses irrigation etc) that consider existing arrangements Relocate the footpaths and construct foot bridges where possible. 	FBOs, Local Leadership	Sensitisation and awareness raising
	Disputes over water and other natural resources			
	<ul style="list-style-type: none"> Conflicts over water allocations. Reduced production 	<ul style="list-style-type: none"> Provide water management training to farmers. Always allow for downstream users including environmental flows. Introduce alternative sources of water such as boreholes. Provide washing points located away from the canals to avoid irrigation water contamination 	PMU, service Provider, FBOs	Well timed information
	Social Disturbances during construction			
	<ul style="list-style-type: none"> Social conflicts Spread of communicable diseases such as HIV/AIDS 	<ul style="list-style-type: none"> Terms of engagement for all contractors must include a strict Code of conduct and Sexual Harassment policy, 	PMU, Service Providers	Code of Conduct in Communities, Sexual Harassment
	Impacts of Construction on local people			
	<ul style="list-style-type: none"> Temporary and permanent physical injuries 	<ul style="list-style-type: none"> All safety precautions must be enforced. 	PMU, Service	Health and Safety

	<ul style="list-style-type: none"> Bronchial diseases from dust. Loss of life Noise Cracking of existing structures from vibrations. 	<ul style="list-style-type: none"> Provide PPE to all workers. Contractor to avoid old equipment. Heavy duty equipment to be minimized. Noisy operations to be limited to certain times. Noise levels to be limited to within acceptable levels. Processing plants should be sited away from residential areas 	Providers	
	Civil Works			
	<ul style="list-style-type: none"> Substandard infrastructure that is not sustainable structure that cannot withstand extreme weather events and climate change 	<ul style="list-style-type: none"> Site specific feasibility studies should be carried out first Norms of construction of civil works must comply with relevant instructions approved by Ministry of Public Works 	PMU, MoPW,	None
	Failure of Private sector to develop community			
	<ul style="list-style-type: none"> Frustrated and used communities Broken trust for future engagement 	<ul style="list-style-type: none"> Community development must be a package within the service providers. Private Sector must be capacitated to strike a balance between profit and social responsibility 	PMU, Service Providers, Project Implementation Team	Community/social Responsibility
	Private sector Monopoly			
	<ul style="list-style-type: none"> Unjustifiable price hikes Unfavourable operating conditions for farmers 	<ul style="list-style-type: none"> Open the playing field but with strict terms of engagement to protect the farmers. 	PMU	None
	Poor Road Network			
	<ul style="list-style-type: none"> Limited market linkage 	<ul style="list-style-type: none"> There is need to invest more resources on road rehabilitation and maintenance systems Road Maintenance clubs should be formed and operationalised whether there has been rehabilitation or not A monitoring mechanism must be put in place at community and at district level 	PMU, MoLGRD, MoAIWD, MoPW, Project Implementation Team, EPAs,	Community Management
	Elitist Community Business Plans			
	<ul style="list-style-type: none"> Lack of ownership Addressing of wrong or insignificant gaps 	<ul style="list-style-type: none"> Build capacity of communities to be able to assess their problems, analyse, prioritise and come up with solutions on their own 	Extension Officers	Proposal Development
	Frosty Farmer-buyer relationship			
	<ul style="list-style-type: none"> Mistrust and suspicion 	<ul style="list-style-type: none"> Create pre and post-harvest dialogue between the parties to discuss expectations on quality, quantity and pricing of commodities 	PMU, Ministry of Trade Agri-Business	Facilitator/Moderator skills
	FBOs paying more attention on Diversification			
	<ul style="list-style-type: none"> Failure for businesses to take off Frustration when things do not go according to plan Failure to pay huge loans taken from the bank 	<ul style="list-style-type: none"> Train FBOs to be able to specialise in their primary role which is production Intensify FBOs training on effective production methods Capacitate and facilitate FBOs in price negotiation 	PMU, Ministry of Trade, DADO, Agri-Business	Efficient farming techniques, Specialisation
	Value Addition Failure			
	<ul style="list-style-type: none"> Failure of business to take off and/or thrive 	<ul style="list-style-type: none"> There is need for updated value addition skills and knowledge pertaining to the particular value chain, There is need for appropriate infrastructure and adequate 	PMU, Ministry of Trade, DADO, Agri-Business	Value Addition, Business Management

		<ul style="list-style-type: none"> capacity to meet the required standards. There is also need for high level business management skills training 		
	Meeting National Standards			
<ul style="list-style-type: none"> Production of sub-standard products Rejection of the processed product Failure to reach wider market 		<ul style="list-style-type: none"> Facilitate decentralisation of the functions of the MBS to allow interaction and support to FBOs through participatory assessments, dialogue, coaching and mentorship Build capacity for communities to be able to understand the issues of standards in a simpler way 	PMU, Ministry of Trade, DADO, Agri-Business	National Standards and Certification
	Poor leadership quality in FBOs			
<ul style="list-style-type: none"> Demotivation of farmer members High membership turnover Corruption Constant unproductive conflicts 		<ul style="list-style-type: none"> There is need for set guidelines with minimum requirements for leadership positions Build capacity in FBO members so that they understand and know how to select their leaders 	PMU, Community Development, Service Providers	Community Management, Leadership
	Less women in leadership positions			
<ul style="list-style-type: none"> Discrimination and oppression of women Perpetuation of gender inequalities in FBOs 		<ul style="list-style-type: none"> There is need to facilitate good gender relations at household level and promote fair sharing of labour and benefits There is also need to promote women in traditionally male dominated value chains such as honey and beef production 	PMU, Ministry of Gender, DADO	Gender equality
	Low Youths Participation			
<ul style="list-style-type: none"> High unemployment rate Failure to build future agriculture base 		<ul style="list-style-type: none"> Promote youths participation in the later stages of value chains where they have a niche 	PMU, Ministry of Youth, Ministry of Trade	Entrepreneurship skills
	Elite Capture off FBOs			
<ul style="list-style-type: none"> Enrichment of individuals at the expense of others 		<ul style="list-style-type: none"> There is need to protect the community and build capacity needed to identify such practices and how to counter them 	PMU	None
	Low Quality and quantity Production			
<ul style="list-style-type: none"> Rejection of produce Produce fetching low prices Low income ad compared to labour input 		<ul style="list-style-type: none"> There is need for effective farming methods and good planning beforehand There is need to raise awareness, educate and mentor farmers on good husbandry and cropping 	PMU, Veterinary Dept, DADO, Agri-Business	Efficient farming techniques, Specialisation
	Low Nutrient Consumption			
<ul style="list-style-type: none"> High malnutrition and stunting levels Exposure to diseases 		<ul style="list-style-type: none"> Integrate nutrition with all value chains through nutrition education, promotion of bio-fortified supplementary crops, facilitate food fairs where FBOs from different value chains can interact and exchange nutritional best practices 	PMU, service providers	Good Nutrition practices
	Failure to service loans			
<ul style="list-style-type: none"> Cyclical poverty 		<ul style="list-style-type: none"> Identify a viable model to assist the farmers that will leave them better off at the end Train farmers in financial management 	PMU, Agri-Business	Financial Management
	Seasonal Financial Dryness			
<ul style="list-style-type: none"> Sliding back into poverty 		<ul style="list-style-type: none"> Promote identification and implementation of alternative viable 	PMU, Agri-	Alternative

	<ul style="list-style-type: none"> Failure to bounce back in the next season 	economic activities to supplement mainstream agro-business	Business	livelihoods
	Poor Operation and Maintenance			
	<ul style="list-style-type: none"> Unsustainability of systems Failure to derive intended value from the infrastructure and equipment Vandalism/Damage to infrastructure and equipment 	<ul style="list-style-type: none"> Offer appropriate training for FBOs to manage facilities and services 	PMU, Community Development, service providers	Community Management
	Low success rate of VSL Schemes			
	<ul style="list-style-type: none"> Community not borrowing from the scheme Economic hardships during off season periods 	<ul style="list-style-type: none"> Facilitate good understanding of VSL as a safety net option to community 	PMU, Community Development, service providers	Alternative livelihoods
	Poverty Mentality			
	<ul style="list-style-type: none"> Failure to convert existing resources into viable business Economic hardships 	<ul style="list-style-type: none"> There is need to raise awareness and educate farmers how to convert existing resources into a business that generates money and how to run it. 	PMU, DEC, District Implementation Team,	Farming as a Business
	Child Labour			
	<ul style="list-style-type: none"> Exploitation of school going children 	<ul style="list-style-type: none"> There is need to involve community leadership and raise awareness on child labour and the implications thereof 	PMU, Ministry of Gender, Community Leadership	Children's rights
	Socio-economic dilemma			
	<ul style="list-style-type: none"> High HIV/AIDS Incidence Rate Increase of Gender Based Violence cases 	<ul style="list-style-type: none"> There is need for the project to have a social management package to support farmers cope with the transition from poverty to economic freedom 	PMU, Ministry of Gender, Community Leadership	Economic Freedom and Social Management
	Water, Sanitation and Hygiene			
	<ul style="list-style-type: none"> Spread of communicable diseases especially diarrhoeal related Poor quality products e.g. milk, honey, Burden on women and girls 	<ul style="list-style-type: none"> Provide water, adequate all-inclusive sanitation and hand washing facility at communal centres 	PMU, FBOs	Health and Hygiene
	Cattle Khola within the homestead			
	<ul style="list-style-type: none"> Poor home hygiene Spread of communicable diseases especially diarrhoeal related 	<ul style="list-style-type: none"> There is need for regular health and hygiene awareness programmes among farmers. These can be done at MBC as farmers bring their milk. 	PMU, FBOs	Health and Hygiene
	Occupational Health and Safety			
	<ul style="list-style-type: none"> Temporary and permanent physical injuries Bronchial diseases from dust. Diseases and illness from livestock handling (milk production, slaughter houses Loss of life 	<ul style="list-style-type: none"> There is need to create awareness, educate and follow occupational and health standards for each activity and monitoring of such. 	PMU, FBOs	Occupational Health and Safety

8. PUBLIC CONSULTATION PLAN

8.1 INTRODUCTION

For the successful implementation and monitoring of some mitigation or enhancement measures a continuous consultative process is required. The implementing team, TRADE PMU, under the guidance of Ministry of Local Government has the responsibility to effectively engage stakeholders in achieving the programme objectives for the benefit of all. This public consultation plan (PCP) forms part of the ESMF and is the same for all categories of rehabilitations, construction and agricultural work. It is for use during public consultation in the screening processes for every IFAD funded project and sub-project under TRADE.

The key elements of the Public Consultation Plan are:

- i. Stakeholder identification and analysis
- ii. Information disclosure
- iii. Stakeholder consultation
- iv. Grievance management
- v. Stakeholder involvement in project monitoring
- vi. Reporting to stakeholders
- vii. Management functions.

8.2 OBJECTIVES OF THE PLAN

This plan provides a framework for achieving effective stakeholder involvement and promoting greater awareness and understanding of issues so that the project is carried out effectively within budget and on-time to the satisfaction of all concerned. The goals of the public consultations are to provide the TRADE with

- Status of implementation of the identified measures
- A sense of the concerns, priorities and aspirations of the scheme members as they implement the measures.
- Information to shape the programs of the project as it progresses
- Whenever possible, specific recommendations and proposals

And provide the participants with:

- A forum to interact constructively and make progress towards solutions and actions
- Feedback from TRADE on information received and steps to follow

8.3 PRINCIPLES

To ensure effective implementation of this plan, TRADE shall be committed to the following principles:

- promoting openness and communication;
- ensuring effective stakeholder involvement;
- Evaluating the effectiveness of the engagement plan in accordance with the expected outcomes.

Thus, the stakeholders are given:

- Clear information on the purpose and objectives of the meeting
- Opportunity to express individual views without interruption or contradiction
- Opportunity to build on views expressed and, whenever possible, to discuss and reach conclusions, consensus or recommendations
- Opportunity to engage in open-ended discussion (generally at the conclusion of the meeting)

8.4 IDENTIFYING TARGET GROUPS

Stakeholders for the purpose of this programme shall be defined as all those people and institutions that have an interest in the successful planning and execution of the activities This includes those likely to be positively and negatively affected by the programme. Table 8-1 is a matrix that will be used to identify the key stakeholders for each sub-project:

Table 8-1 Stakeholder Identification Matrix

AFFECTED PARTIES	HOW TO IDENTIFY THEM
People living in the vicinity of the proposed works. (students, teachers, parents etc)	<ul style="list-style-type: none"> Identify the local government area(s) that falls within 500m radius of the proposed infrastructure. Review available data to determine the profile of the whole stakeholder or relevant group. Use identified groups and individuals to tap into stakeholder networks to identify others.
Special interest groups	<ul style="list-style-type: none"> Identify key individuals or groups through organized groups, local clubs, community halls and religious places. Be aware of similar local groups or individuals.

The consultation process shall ensure that all those identified as stakeholders are conferred with. Subject to TRADE PMU approval, the Environmental/Social consultant will share information about the sub-project with the public to enable meaningful contributions and thus enhance the success of the programme.

8.5 KEY STAKEHOLDERS

Stakeholders of this project shall be defined as all those people and institutions that have an interest in the successful planning and execution of the programme. This includes those likely to be positively and negatively affected by the programme activities.

The key stakeholders to be continuously engaged includes all those listed in section 2.3 (ii). The list in section 2.3 (ii) is not exhaustive. As the Programme gets underway, the PMU will develop a detailed PCP identifying all possible stakeholders, their specific information needs and the appropriate modes of consultation as well as feedback mechanisms. Information Disclosure and Consultation

The type of information to be disclosed to the various stakeholders depends on their interests and how they will be affected by the Programme – or how TRADE activities may be affected by them. Thereafter various communication tools can be utilized for the engagement process, such as:

- Programme notices published in local newspapers;
- Radio advertisements;
- Direct mailings to communities;
- Presentations with or without focus group sessions);
- Targeted e-mails;
- One-on-one meetings, presentations, seminars, workshops, e-mails and phone conversations with stakeholders;
- Site tours; and
- The use of social media.

Table 8-2 below gives a general overview of the types of information needs for various stakeholder groups.

Table 8-2 Summary Overview of a Public Consultation Plan (PCP) for TRADE

Stakeholders	Information to be disclosed	Consultation means
TRADE sub-projects, neighbouring communities, general public	Current and new activities and how these relate to them in terms of opportunities and threats	Local leaders i.e. Chief's or district offices, Churches, national media, social media, IFAD / MLGRD/TRADE website etc.
	Forum to express community / health fears and get feedback e.g. accidental release/escape; contamination; emergencies (fire)	Public consultations, focal group discussions, social media Training specific members of the communities, awareness, education
Staff / workers at existing facilities	How refurbished and expanded facilities will affect their work environments including Occupational Health & Safety rules	Staff newsletters, bulletin boards, signs in labs; email, website, meetings with management, staff sensitization & training program in lab safety
Farmers Groups, Agricultural NGOs, Farmer Union	Consultation on information needs / food safety	Researchers, District Extension services, Baseline surveys / subsequent surveys to monitor impacts, emails, bulletins

Agrochemical companies	Available information on new technologies, crops varieties for improved yield etc	Seminars; District Extension services, sales agents
Intergovernmental Institutions; IFAD	Sharing Implementation findings and experience.	Intergovernmental meetings and consultations
		Build partnerships through meetings, seminars, workshops
University Graduates	Internship opportunities	Website, public media, bulletin boards
Youths	Opportunities for going into farming and for employment during construction, sponsorships for education	District Agricultural Offices, public consultations

8.6 MEASURES REQUIRING CONTINUOUS CONSULTATIONS

The following table identifies the mitigation measures that require continuous consultations and monitoring. It defines the goals and expected outcomes of the consultations and indicates the frequency of the consultations:

Table 8-3 Measures requiring continuous consultations

NO.	ENVIRONMENTAL/ SOCIAL IMPACTS	PROPOSED MITIGATION MEASURES	RELEVANT INSTITUTION	GOALS AND EXPECTED OUTCOMES	CONSULTATION FREQUENCY
4	Spread of HIV/AIDS	Strengthen HIV/AIDS Awareness Campaigns in Schools, Training of school administrators and staff in HIV/AIDS issues, encouraging participation of the private and public sectors in HIV/AIDS issues and reinforcement of school curriculum with HIV/AIDS issues.	Min of Health EAD	% increase in those affected. (Monthly statistics from hospital and clinics)	Monthly
5	Loss of vegetation	Selective clearing of project sites, reforestation, preservation of protected plant species, use of alternative sources of energy, use of environmentally friendly technologies, awareness campaigns.	EAD, Forestry Department Min of Agriculture	Increase in area of land cultivated and deforested	Before project implementation Annually during and after project implementation
6	Loss of Soil	Stabilization of loose soil, controlled excavation, preservation of vegetation cover, controlled transportation of raw materials, appropriate landscaping.	Land Resources, EAD	Area and size of gullies formed Amount of silt deposited in watercourses	Annually
7	Loss of fragile ecosystems	Conduct feasibility studies before construction, use expert knowledge of ecologists, introduction of ecosystem conservation projects, fencing	Land Resources Min of Agriculture EAD	Size of area affected	Annually
9	Soil and water pollution resulting from the accumulation of solid and liquid waste Soil and water pollution from chemicals & fertilizers	Controlled disposal of wastes and effluent by use of appropriate disposal facilities, use of appropriate drainage structures, use of cleaner technologies, proper storage of materials, awareness campaigns	EAD Water Resources Board PCB	Change in chemical and biological water quality	Bi-annually
10	Dust, Emissions, Strong Light, Noise and Vibration	Controlled operation times, use of appropriate equipment, proper orientation of lights, use of alternative materials, use water sprinklers to control dust, use of scrubbers	EAD MBS	Number of complaints Extent of property and vegetation soiling	During construction
11	Water-borne and / or water related diseases	Provision of potable water supplies and sanitation facilities, capacity building in sanitation and health issues, awareness campaigns	Min of Health	Increase in water related ailments	Annually
12	Loss of natural and cultural heritage.	Conduct feasibility studies, fencing, introduce proper antiquity education programmes	Dept of Tourism Min. of Education	Number or size of property lost	Before project implementation During project implementation
13	Loss of animals and aquatic life.	Minimize vibrations and strong noise, enforcement of parks and wildlife law, conduct feasibility studies, avoid contamination of soil and water	Wildlife Dept. Fisheries Dept EAD	Animal count Fish and aquatic life estimates	Before project implementation Annually during project implementation
14	Disturbance of marginal areas	Avoid extraction of raw materials from marginal areas, no construction of structures in marginal areas.	EAD Min of Agriculture	Size of area affected	Bi-annually
15	Incidence of Flooding	Forestation of the catchment areas of the irrigation schemes	EAD FORESTRY DEPT	Number of trees planted Area planted with trees Number of people or properties affected	Annually
16	Exposure to Agro-chemicals	Encourage organic farming, and limit the use of Agro-chemicals. Conduct awareness training & workshops	PCB, DEO, MoH	Number of people affected by agro-chemicals	Annually
18	Lack of farm inputs (loans, agro-chemicals etc)	Encourage organic farming, provide training on marketing and bulk purchasing to farmers, and provide critical marketing information to farmers regularly.	Min of Agriculture Farm	productivity (per Ha) Financial status of the farmers Change in standard of living	Annually

8.7 CURRENT PUBLIC CONSULTATION



Figure 8-1 Stakeholder Consultation Meeting – Thyolo District

In the process of developing the current ESMF the local stakeholders were consulted to solicit their views and concerns as regards the proposed intensification of agricultural activities resulting from the roll out of the various value chains. The list of the consulted stakeholders is included in appendix 6. Two approaches were employed, i.e. the administration of a questionnaire and direct interviews with targeted stakeholders.

8.7.1 Consultations with the major organizations.

The consultations with the designated implementing or major organizations involved mainly the administration of the questionnaire, meetings and interviews.

In general, the aims of the consultations included (i) introducing the project to the Stakeholders; (ii) identifying together the potential environmental and social challenges the project may face; (iii) identifying any other possible challenges and how they should be addressed or mitigated; and (iv) bringing on board the major stakeholders to garner project ownership from inception.

According to these stakeholders, the approach that TRADE used of consulting with them in the identification and selection of key value chains shows the genuineness and seriousness of the initiative. For them it was a way of reviewing RLEEP as TRADE's predecessor and an opportunity to make things much better the second time around. They also appreciated the fact that TRADE had chosen the different commodities to be promoted in the district where they had a comparative advantage which meant that it was going to be easy to implement the project. As key programme institutions, they also value the component of institutional coordination and strengthening and believe the capacity and skills that are going to be developed will assist the country beyond the TRADE project. Most community interventions are currently being hampered by lack of coordination, inadequate skills and limited access to finance among other challenges. More specifically, they brought attention to the following issues:

- (i) The dilemma of agricultural intensification at the expense of the environment - - there is need for similar intensity in environmental restoration where preventive measures are surpassed by the need for food production.
- (ii) A fragmented planning, implementation and monitoring approach at national and district levels which will affect sustainability of the programme – there is need for wider stakeholder involvement with clear roles and responsibilities throughout the project.
- (iii) Selection of Service Providers who put more importance on ticking the boxes as compared to appreciating the complete community development cycle – There is need for clear terms of reference for the service providers and effective monitoring mechanisms at all levels.
- (iv) Low community pace in maturing and being self-sufficient after external 'starter pack' phase – More resources need to be put towards capacity building coupled with correct messages to communities from the beginning of the programme. Strong coaching and mentorship programmes should be instituted within the programme design.

- (v) Difficulties faced by communities in accessing business funding resulting in the farmers being worse off than before due to unpaid loans, high interest rate exacerbated by harsh climatic conditions – There is need for innovative business models that the farmers can use and benefit fairly.
- (vi) Private sector monopoly in some value chains which ends up being costly for the farmers – Where possible, service provider's platform should be liberalized so that farmers can have a choice depending on the services being offered.
- (vii) Youths participation in agriculture – For a change the value chain approach provides an opportunity for youths if they can be empowered to participate in the later stages of the value chains as entrepreneurs using their energy and skills.
- (viii) The programme must work on promoting best practices and successful FBOs - Learning and exchange visits across districts and provinces will be useful.

8.7.2 Consultations with the public.

The public consultations were done to raise awareness of the programme by informing the public in the concerned areas through their local leaders and some public gatherings about the upcoming programme in their areas. The public was also interviewed to gather their opinions regarding the programme and the environmental and social consequences that may result from its implementation.

The stakeholders who were consulted are listed in appendix 6 together with a sample of the record of the public consultations.

8.7.3 Analysis of the responses on the questionnaires

The following is a summary of the responses from the public consultations.

a) Environment and Social Concerns

The envisaged **Positive** environmental and social impacts include the following:

- Empowerment of smallholder producers through developing their business skills both technical and managerial
- Quality Improvement of farm outputs due to enhanced capacity
- Provision of infrastructure and safe post-harvest management of crops
- Allowing sufficient engagement period between farmer and service provider
- Learning and mentoring of farmers
- Creation of dialogue between farmers and buyers
- Job creation for the locals especially skilled youths

b) The envisaged Negative environmental and social impacts include the following:

- Inadequate of financing for inputs to produce at large scale and to venture into value addition (processing)
- Strong winds and floods, cyclones and earthquakes
- Conflicts from infrastructure access and control issues
- Breakdown of equipment and failure to repair and /or replace
- Failure to get a fair price from service providers contracted by the programme

In summary, the consultations show that the public perceive the programme to be of great potential to bring improvement to the livelihoods of the concerned communities through bringing the various value chains that will assist with increased production and productivity as well as the possibility of job creation.

There were some negative impacts anticipated but the communities were also able to suggest mitigation activities that should be included in the programme. Some of these were centering around possible externalities due to increased use of pesticides but communities believe with proper training on use and management of such most adverse effects could be minimized.

In General the following comments were made by the stakeholders:

- There should be adequate extension services to assist them with good farming techniques which will improve quality and quantity of their farm products.
- Communities should always be informed of any developmental activities that will take place in their areas.
- There is need to provide good quality seed especially for potato and groundnuts and seed houses where the value chain will be promoted.
- Efforts should be made to improve the road network to markets so that the buyers can also feel free to come and collect from the community.
- The programme will be very helpful to our community if it will be well implemented

8.7.4 Results of The Stakeholders' Survey

During the study a number of stakeholders were consulted and the list of the consulted stakeholders is included in Appendix 6.

Generally, everybody, i.e. Government departments, NGOs, Locals in the programme area were very supportive and in the stakeholders meetings about 95% of the respondents had no objection to the agriculture infrastructure rehabilitation/construction programme being proposed.

Some association members had reservations as they held the whole consultation process with suspicion since many such promises have never been fulfilled. The stakeholders also hoped that the programme would provide them with an opportunity for livelihood improvement. As a result, they expect to be employed during the programme life cycle.

8.8 PUBLIC CONSULTATION WORKSHOP

A Public Consultation Workshop for the TRADE Environmental and Social Management Framework was held in Lilongwe on the 29th of July 2019 at the Golden Peacock Hotel (Figure 8-2).



Figure 8-2 Consultative Workshop at the Golden Peacock Hotel

MINUTES OF MEETING

8.8.1 Attendance

The list of participants is attached as Appendix 6.

8.8.2 The Workshop Agenda

The following table outlines the agenda for the workshop:

Table 8-4 The Worksho Agenda

08:30 - 09:00	Registration	FARMSE
09:00 - 09:15	Welcome remarks & Introductions	CHAIR
09:15 – 10:00	Objectives of the Workshop and Overview of the TRADE programme	FARMSE Programme Coordinator
10:00 - 10:30	TEA BREAK	
10:30- 11:00	ESMF Overview	E & S Safeguards Specialist
11:00 – 11:15	Discussions and Plenary Session	CHAIR
11:15 - 11:45	Potential Environmental Impacts and Mitigation measures	E & S Safeguards Specialist
11:45 – 12:00	Discussions and Plenary Session	CHAIR
12:00 – 12:30	Potential Social Impacts and Mitigation measures	E & S Safeguards Specialist
12:30 – 12:45	Discussions and Plenary Session	CHAIR
12:45 – 13:00	Closing Remarks and Way Forward	FARMSE Programme Coordinator
12:45 - 14:00	LUNCH AND DEPARTURE	

The following is a record of the question and answer session that followed the presentation of the PROCAVA Environmental and Social Management Framework at the Final Public Consultation Workshop:

8.8.3 Workshop Proceedings

i) Welcome remarks & Introductions

The meeting was chaired by Mr. Manuel Mang'anya, the Monitoring and Evaluation Specialist at FARMSE. The Chairperson welcomed everyone who had attended the meeting, requested a volunteer to open the meeting with a word of prayer and then invited self-introductions from all members.

ii) Objectives of the Workshop and Overview of the TRADE programme

He then invited Mr. Dixon Ngwende, the FARMSE Programme Coordinator to officially open the Workshop. Who explained that the purpose of the workshop was to review the TRADE Environmental and Social Management Framework report that had been produced by the IFAD Consultants. He explained that the TRADE programme will be supported by IFAD and the Malawi government and that the lead implementing Ministry will be the Ministry of Local Government and Rural Development (MLGRD).

He welcomed all the participants from all over the country and expressed the importance of having attended the meeting. He explained that the TRADE programme is coming in as a follow-up programme of RLEEP which will have some interface with FARMSE. It will be picking from where RLEEP left, fill up the gaps that RLEEP left out, look at the lessons learnt, and how best to make sure the programme is more sustainable and expand the programme to much more districts.

He elaborated on the purpose of the ESMF report as a document that outlines what must be done to safeguard the communities and the environment from any undue negative impacts from the development programmes of TRADE. At the same time the document seeks to enhance any positive impacts of the programme.

He then went on to make a presentation on the overview of the TRADE Programme to bring all the participants to speed as to what the programme is all about. He explained that the programme is mainly a value chain development programme looking at various agricultural value chains.

The goal of TRADE is to improve the sustainable livelihoods of rural farmers by increasing value chain commercialization of selected commodities and improving resilience of rural poor and smallholder farmers

He then elaborated on the target districts as initially those which participated in RLEEP to finish up programmes that were left hanging and then expand to up to nine more districts. The programme will target 127 000 households of which 50% should be women and in each gender ground 50% should be youth. The total funding for the programme will be US \$125 million.

iii) ESMF Overview

The Chairman then handed the floor over to the Consultants for the presentations of the ESMF report.

The first presentation was conducted by Mr. Sibekile Mtetwa, the Environmental Safeguards Specialist, who gave a comprehensive overview of the whole ESMF report, covering all its chapters.

The presentation was followed by a plenary question and answer session. The participants concerns are captured in table 8-5 below.

iv) Potential Environmental Impacts and Mitigation measures

The second presentation was also presented by the Environmental Safeguards Specialist and it covered the "Potential Environmental Impacts and Mitigation measures".

The presentation was based on the findings from the field consultation process and dwelt on the potential environmental impacts. The consultant highlighted the environmental impacts that were identified, their causes, their mitigation and enhancement measures, the possible responsible persons for implementing the mitigation measures and any possible capacity building requirements for the implementors to be effective. The contents of this presentation were based on what is detailed in Chapter Seven of the ESMF, the "Environmental and Social Management Plan"

The presentation was followed by a plenary question and answer session. The participants concerns are captured in table 8-5 below.

v) Potential Social Impacts and Mitigation measures

The third presentation was presented by Mrs. Henrietta Mutsambi, the Social and Gender Safeguards Specialist. The presentation covered the "Potential Social Impacts and Mitigation measures".

The presentation was also based on the findings from the field consultation process and the consultant highlighted all the possible social impacts that were identified, their causes, their mitigation and enhancement measures, the possible responsible persons for implementing the mitigation measures and any possible capacity building requirements for the implementors to be effective. The contents of this presentation were based on what is detailed in Chapter Seven of the ESMF, the "Environmental and Social Management Plan"

The presentation was followed by a plenary question and answer session. The participants concerns are captured in table 8-5 below.

vi) **Participants Concerns**

Table 8-5 Participants Concerns

No.	CONCERN RAISED / SUGGESTIONS	RESPONSE BY CONSULTING TEAM
1.0	<p>From the exclusion list, projects that require relocation and compensation are not going to be funded by the project. Does this mean that IFAD does not fund any projects that requires compensation?</p>	<p>The exclusion list refers to the conditions that have been set out only for TRADE, having considered its objectives, target beneficiaries and available funding.</p> <p>In general, if a project is of national interest and a proper social assessment has been carried out, the Project Affected People (PAP) have been consulted and Resettlement Action Plans (RAP) has been produced, IFAD can still fund such a project if the Government will undertake to properly compensate the PAPs.</p> <p>However, for the TRADE programme any such sub-project should be avoided as it will turn out to be costly.</p>
2.0	<p>In the screening process show that the structure responsible for environmental screening is the District Environmental Sub Committee (DESC) and EDO is like the secretariat</p> <p>Also Emphasize DESC on the ESMF safeguard specialist human resourcing diagram/organogram</p>	<p>DESC shown that they are responsible for the screening process.</p> <ul style="list-style-type: none"> • Section 5.4 has been reviewed accordingly • Figure 5-4 has been modified to reflect the change <p>DESC emphasized on in the Organogram</p> <ul style="list-style-type: none"> • Figure 5-3 has been modified to reflect the change
<u>3.0</u>	<p>In the spirit of harmonization, the presented GRM has to be similar to the existing ones. (check MASA 4 – World Bank) The Flow of the process of raising the complaints is the same but the emphasis is not clear. The developed GRM must be streamlined to the existing GRMs and put emphasis on the existing committees which include “Village Grievance Redress Mechanism Committee, Area Grievance Redress Mechanism Committee and District Grievance Redress Mechanism Committees” which were established to handle complaints at the three levels.</p>	<p>The local level GRM will be streamlined accordingly and put emphasis on the existing committees.</p> <ul style="list-style-type: none"> • Section 8.9.1 was reviewed to reflect the emphasis on the existing GRM structures • Figure 8-2 was also edited accordingly.
4.0	<p>From past experience with such projects as PRIDE and RLEEP, we noticed that centralized environmental and social management of the project made it difficult for the head office-based staff to be effective in the districts as they were overwhelmed by the environmental and social issues which were realized from the districts. Can the current programme consider engaging regional Safeguards specialists in addition to the Head office one.</p>	<p>The suggestion was noted and the ESMF will be reviewed to include the engagement of the regional safeguards Specialists.</p> <ul style="list-style-type: none"> • Section 5.2, Section 5.4 and section 5.4.2 were reviewed to reflect the change • Figure 5-3 and figure 5.4 were altered to reflect the change
5.0	<p>In your summary of categorization of TRADE value chains, I would like to understand how you chose the value chains you will start off with, and how you will select the additional value chains, since you said you will include some more value chains in TRADE? Can you not include aqua-culture and bananas since a lot of people are involved in these value chains?</p>	<p>In terms of the value chains that will be adopted by TRADE, the initial ones will be those that were done under RLEEP and any additional ones will be identified as the programme is implemented to include value chains that will be necessary and feasible as driven by the demand from the possible beneficiaries. So, aquaculture and bananas, if identified and demanded by the stakeholders, they will be included in TRADE.</p> <p>The initial value chains have to be done as a number of them were not completed under RLEEP and will need to be</p>

		finalized so that they become sustainable, e.g. some warehouses and dip tanks are still lying idle three years after the project.
6.0	Mine is an observation, looking at page 55, there two districts that were left out, i.e. Likoma and Neno, was this deliberate or just a mistake?	The two districts were left by mistake because of the source that was used to get the districts since it's an old map. These will be included in page 55, Figure 5-1
7.0	In the exclusion list, when do you say people have encroached a forest especially when we look at such value chains like Bee Keeping, which actually require forests?	When we talk of a forest being encroached, we will be referring to consumption/destructive projects which may involve clearing of trees, etc. However, with honey production, this actually requires forests and promotes forest conservation and preservation since the bees need trees to collect nectar.
8.0	Is there an interphase where the community and IFAD will sit down and discuss about the final penalty for any grievances that would have been raised by the aggrieved? Especially where somebody goes straight to IFAD to launch a complaint, will IFAD make its own conclusions alone.	The IFAD Grievance Redress Mechanism has a complete set of processes to be able to come up with the final resolution of any grievance that may be raised and they include consultations and investigations on the ground. IFAD does not make arbitrary resolutions without ground truthing.
9.0	There was a proposal to include Ministry of Natural Resources, Energy and Mining in the Steering Committee if there is room for that.	Yes, it can be included since it is very relevant to the activities of TRADE.
10.0	Page 16 and page 18 on the EIA approvals. It's not EAD that does the approving but it is the Secretariat of a Technical Committee that does the assessments and recommends the approvals.	Text to be reviewed to reflect that EAD is part of the Technical Committee.
11.0	On page 54, Section 5.2 states that where an EDO is not available services will be provided by consultants. However, wherever there is no EDO an acting EDO is always appointed either from ministry of trade or Forestry, so there will always be someone responsible for Environmental and Social issues in any District.	The point was noted and the section/statement corrected accordingly.
12.0	Appendix 1, EIA Department has a generic screening form that we use locally and if that could be adopted for TRADE it would be better than introducing something new.	The generic Screening Form will be adopted and used for TRADE.
13.0	On page 158, on the list of Stakeholders who were consulted you make reference to the EIA Department, please correct it to EIA Section.	The correction will be made in the appropriate table.
14.0	During the screening process of sub-projects, there is a tendency of those doing the screening to record false information just to have the sub-projects approved but when you go on the ground you find that the situation is completely different and does not warrant the approval of such a sub-project. How do you ensure that such things do not happen?	Normally, once all the sub-project application documentation has been submitted, part of the approval process is what they call verification. The verification stage involves the selection team visiting every one of the potential sub-projects and inspecting them to make sure that what is in the screening reports is correct and all environmental and social issues have been taken care of. Once the selecting team is satisfied then the sub-project gets funded. The verification process must be highlighted in the ESMF.
15.0	One of the possible solutions to make sure that the sub-projects are being adequately scrutinized is to capacitate the officers that will be undertaking these appraisal exercises like refresher training in Safeguards, screening, etc.	These trainings have been budgeted for as part of Capacity building and will be conducted so that the officers will carry out their duties smoothly.
16.0	Just a comment on the use of burning bricks. The National Construction Industry Council has banned the use of burnt bricks and is advocating the use of environmentally friendly alternative materials. Only those who already have these bricks can apply to be allowed to clear them.	The ban was noted and welcomed as it serves to protect the environment.

17.0	On the ambient air quality, there has been a lot of stressing of pollution from construction activities but I think we should also include dust from milling activities and the actual agricultural and processing activities. This can be reflected in the Management Plan,	Point was noted and the dust generation from milling activities was included in the ESMP including the mitigation measures of installing extractors and use of appropriate PPE.
18.0	In terms of the Categorization of social issues, it seems it is a bit different from that one used for environmental issues. Can this be rationalized.	A slightly different categorization was mistakenly used for the Social issues and this will be rationalized in the final document.
19.0	Also use of project phases in the consideration of social issues distorts misleads and mixes some important impacts. If impacts in the Social Issues can be considered similarly to the environmental issues without considering project phases.	Point was noted and the phasing of the impacts will be removed since a number of them are cross cutting and affected different phases of the project.
20.0	There is an issue about women empowerment. The document on page 4 states that it will target 50% women and 50% youth. Where will man be. Is this project entirely for women and youth? At the same time your analysis alluded to the fact that there were less women in leadership positions and that there is need to promote women into male dominated value chains such as Bee Keeping. Can you clarify.	<p>The project is promoting the participation of women and youth as man are already dominating the projects. Also, the 50% women means the other 50% is men, whilst for each gender grouping 50% of them should be Youth.</p> <p>The meeting agreed that the statement was ambiguous and could confuse the reader. So, the statement just needs to be expounded.</p> <ul style="list-style-type: none"> The corrections were effected in section 1.5.
21.0	<p>Some participants felt that the mitigation measures for Social issues are too many and need to be Prioritised and streamlined to remain with the most important so that they don't become confusing.</p> <p>However, the meeting agreed that since this is a framework document it needed to remain broad and the streamlining can be done for the site specific ESIAS.</p>	<p>The mitigation measures will be relooked at as suggested, emphasizing on issues which are within the purview of the project without leaving any critical issues that were identified in the field.</p> <p>However, the majority of what was presented is of utmost importance and will need to be considered during implementation.</p> <p>The prioritization may cause a risk of diluting the intended effect and down the line during implementation, issues may start emerging and start slowing down the project.</p>
22.0	In terms of Value addition, further desk study can be done looking at Local Economic Development (LED) project which did a lot of work on Value addition.	Desk study to be undertaken
23.0	In terms of community development process, lessons can be taken from the DADO graduation model.	Lessons will be drawn from the DADO graduation model
24.0	Page 3 the note in the map indicates that the 11 RLEEP districts will again benefit from the TRADE project, yet they are already doing very well from the inputs they received from RLEEP. There are districts which have not received any assistance and are very backward. Why doesn't TRADE move onto these other districts so that they equally benefit?	<p>For TRADE we should not indicate these RLEEP Districts as target districts because this is misleading. This is because in reality, the programme will just continue to finalise those sub-projects which were left hanging when RLEEP was concluded especially those which are not effective and not operational. The main aim being to make them operational and sustainable.</p> <p>Then the programme will add on other new districts, scale up and expand on what was learnt in the initial 11 districts. Based on programming</p>
25.0	The ESMF needs to be specific about the target districts as these will be required to be able to predict the possible impacts and interventions	The programme will expand to 20 of the 28 districts in Malawi. However, at this point in time the other target districts have not been identified.

vii) Closing Remarks and Way Forward

After all the presentations and Plenary discussions with the participants, the Consultants handed the floor to the Chairman who then invited the Mr. Dixon Ngwende, the FARMSE Programme Coordinator to officially close the Workshop.

Mr. Ngwende expressed his gratefulness to all the participants for the lively participation and to the consultants for the excellent presentations. He really felt that the TRADE programme will start on a correct footing since all the stakeholders had been consulted and they had aired their concerns in the formulation of the programmes ESMF. He believed that its implementation will go a long way in protecting the environment in the course of sub-project implementation.

He reiterated that in the project design there is already inclusion of a Gender inclusiveness specialist and that this specialist will see to it that the contents of this ESMF are fully implemented. He then requested a volunteer to close the meeting with a word of prayer.

8.9 GRIEVANCE REDRESS MECHANISM

Implementation of sub-projects activities under TRADE will take place in various locations of the selected programme districts. The implementation may generate a number of challenges and complaints especially to those which relate to infringement of rights of sections of the society. As part of addressing such complaints and in the spirit of the continuous consultation process, a grievance redress mechanism has been developed for TRADE. The grievance redress mechanism (GRM) will consist of three parallel systems. These systems are; i) a community-based system ii) a formal system and iii) the IFAD Complaints procedure.

The GRM will be a system by which queries or clarifications about the programme will be responded to, problems with implementation will be resolved, and complaints and grievances will be addressed efficiently and effectively. The purpose of the grievance redress mechanism is:

- To be responsive to the needs of beneficiaries and to address and resolve their grievances;
- To serve as a conduit for soliciting inquiries, inviting suggestions, and increasing community participation;
- To collect information that can be used to improve operational performance;
- To enhance the programme's legitimacy among stakeholders;
- To promote transparency and accountability;
- To deter fraud and corruption and mitigate programme risks.

When an aggrieved person declares a grievance, they may elect to take the community-based route or the more formal one (Figure 8-3):

8.9.1 Community Based System

This will be a stand-alone Grievance Mechanism where the communication mechanism involves only community members and will tend to be site specific. This will be used to facilitate agreements among community members but also to solve disagreements where these might occur. The Community Based Grievance Redress Mechanism, aims to use the existing traditional structures and facilitate grievance resolution at higher levels (including the court of law, where necessary).

Communities tend to rely substantially on their own internal social regulatory systems including mechanisms to deal with grievances that work in parallel with the formal systems. These internal social regulatory systems will be used to the extent possible at community level. Recourse where necessary will be facilitated by the Programme, but in general TRADE will ensure easy access to information through culturally appropriate means and language of communication.

In solving problems, negotiation and agreement by consensus will provide the first avenue to iron out and resolve any grievances expressed by programme affected individuals. Thus, appropriate community-based channels of grievance redress mechanisms will be put in place, and the programme affected people sensitised to make use of them.

The channels will have to be in line with the norms of the communities as well as laws of the country. Thus, the process will involve informal courts handled by traditional leaders (village headmen, Chiefs, Senior Chiefs, etc). And will follow the following route (Figure 8-3):

i) Group Village Headman level

The first port of entry is the Group Village Grievance Redress Committee (GVGRC) to operate at Group Village Headman level. The GVGRC preside over the matter over a set time (possibly 15 days) from receipt of the grievance to act upon it.

ii) TA Level

When one party is not satisfied with the decision at Group Village Headman level, the complaint can be taken up to the Area Grievance Redress Committee (AGRC). The AGRC operates at Traditional Authority Level. In most cases such complaints get sorted out at the Senior Chief level.

iii) District Commissioner

However, those who are not satisfied will be allowed to appeal to the District Commissioner (DC). At this level the District Grievance Redress Committee will preside over the case.

However, if the aggrieved party is still not satisfied then they can ultimately take the formal route.

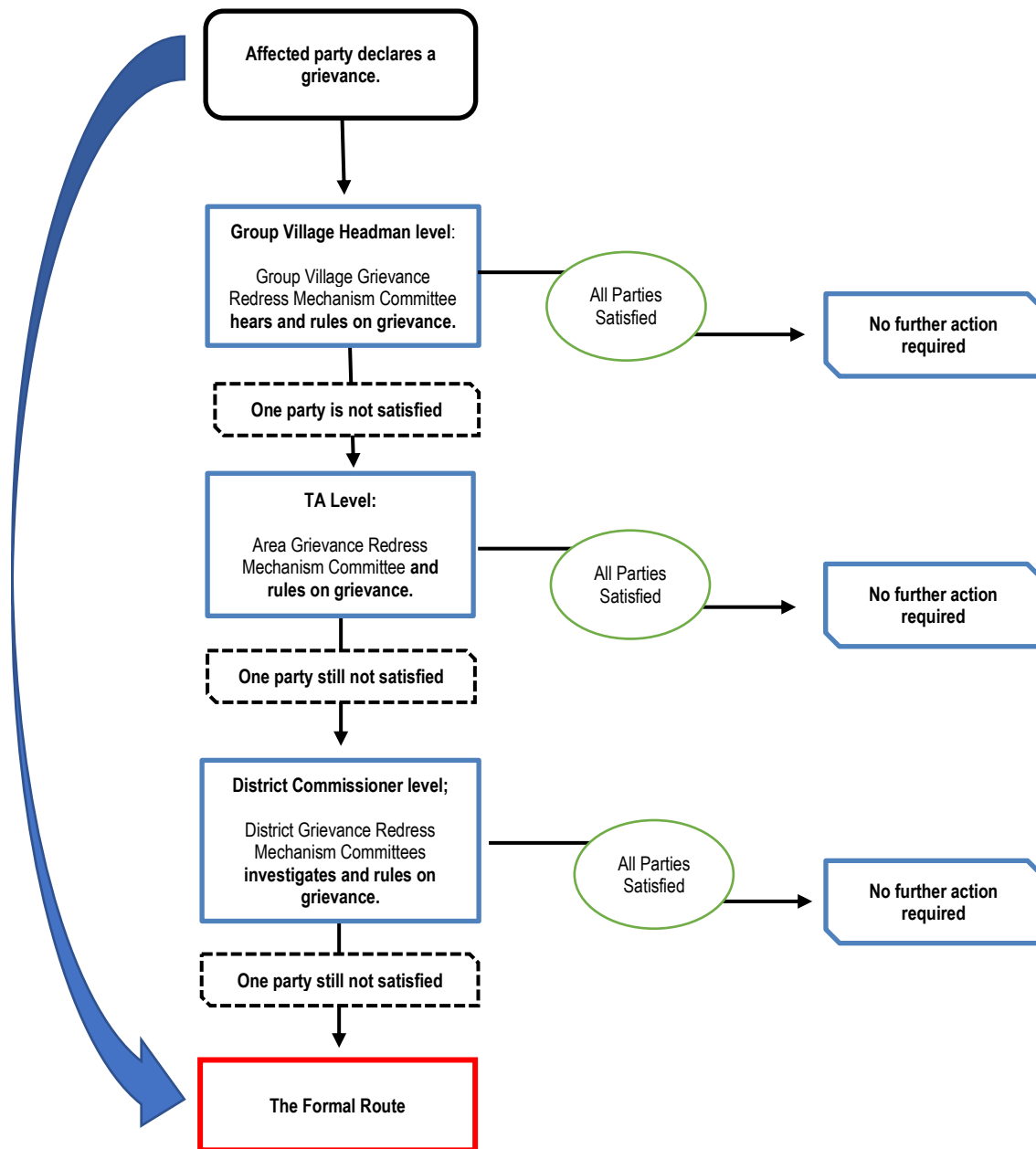


Figure 8-3 The Community-based grievance mechanism.

8.9.2 Formal GRM

The formal Grievance Redress Mechanism is detailed in Appendix 8. it consists of the following components: -

- The access point for impacted/concerned people will be situated as close to the beneficiary farmers as possible, such as places at the sub-project and TRADE offices. TRADE staff will be responsible for receiving the Grievances, classifying and logging them.
- An acknowledgement of receipt should be given to the complainant containing an expectation of when they will receive a response.
- The grievance is then Assessed and investigated to identify all the key facts.
- A resolution is then arrived at and the proposed actions are confirmed with TRADE/Ministry of Local Government senior members of staff.
- A response is then communicated to the complainant within the timescale promised.
- The complainant is given room to appeal to the Ministry of Local Government or the Courts of Law if they are not satisfied with the response.

- Once done the case is brought to a closure and all the staff members of TRADE are made aware of the complaint, any underlying issues and plans to prevent any future recurrence of the issue.

8.9.3 Additional GRM Approaches

Besides the proposed GRM approaches, aggrieved persons can also employ additional channels to air their complaints. These include the IFAD Complaints procedure. The objective of the IFAD Complaints Procedure is to ensure that appropriate mechanisms are in place to allow individuals and communities to contact IFAD directly and file a complaint if they believe they are or might be adversely affected by an IFAD-funded project/programme not complying with IFAD's Social and Environmental Policies and mandatory aspects of SECAP. Parties adversely or potentially adversely affected by IFAD-funded projects and programmes may bring issues to the Fund's attention using SECAPcomplaints@ifad.org. **IFAD has zero tolerance to** for Sexual Exploitation and Abuse. *Any Sexual Exploitation and Abuse (SEA) complaints received shall be directed to IFAD's Ethics Office.*

Complaints must concern environmental, social and climate issues only and should not be accusations of fraudulent or corrupt activities in relation to project implementation – these are dealt with by IFAD's Office of Audit and Oversight.

9. ENVIRONMENTAL AND SOCIAL MONITORING PLAN

9.1 INTRODUCTION

The Environmental effects of implementing the TRADE programme and the success of the mitigation measures, must be monitored by the TRADE PMU with the help of other relevant authorities. This monitoring is an important part of managing the impacts of the programme. It is used for timely identification and correction of administrative, financial or technical lapses or inadequacies in the execution of programme environmental and social risk mitigation measures.

The objective for monitoring is twofold:

- To provide timely information about the effectiveness of the environmental and social management screening process as outlined in the ESMF. Information generated will inform continuous improvement to the process,
- To establish the progress in implementation of the mitigation measures, the extent to which they are effective in maintaining environmental and social integrity and if any changes are required to improve the ESMF implementation.

Monitoring is done on the basis of agreed upon indicators. Examples of typical environmental indicators include;

- (i) Evidence of anti-soil erosion measures such as terraces,
- (ii) Re-planted vegetation,
- (iii) Constructed drainage channels,
- (iv) Gazetted places for waste disposal and mechanisms for waste disposal in place,
- (v) No large-scale clearance of forests and drainage of wetlands,
- (vi) Filled up burrow pits, etc

Social indicators include;

- (i) Representation on the community management committee
- (ii) Equitable sharing of benefits from the programme intervention
- (iii) Numbers of members attending programme planning and implementation meetings
- (iv) Effect of programme implementation on local household economies.

These indicators must be reviewed in conjunction with environmental guidelines for Contractors, Pesticides use, Waste management, Maintenance of Facilities (education and health infrastructure, roads, water and sanitation facilities).

9.2 AREAS TO BE MONITORED

9.2.1 Environmental issues

a) Soils

Soil degradation occurs as the soils are exposed and or compacted during the Value addition infrastructure construction potentially affecting the drainage of the areas.

The farmers must ensure that no gullies or rills develop in the programme areas. This can be avoided by taking such soil erosion measures as construction of embankments and designing drainage along work areas. The absence of gullies and rills will be used as a measure of the success of the control measures.

The soil can be scotched by chemical spillages. This will render the soil poisonous and it must be discouraged at all cost.

d) Vegetation

Unnecessary vegetation clearing and grass fires must be prevented at all costs. The trees should not be gathered for firewood or cut for other purposes. The local residents must be monitored to ensure that firewood is not excessively collected.

e) Wildlife

Under such situations, farmers may want to snare small animals. All wildlife should be treated in accordance with the Wildlife Act.

9.2.2 Marginal lands/fragile ecosystems

Marginal lands and fragile ecosystems must be protected against abuse.

a) Chemical pollution

A great likelihood of chemical pollution of the water and the soil exists and in order to monitor the amount of pollutants in the soil or water, samples must be taken regularly from them for pollution testing.

b) Water resources

Both quality and quantity of water resources in the rivers must be properly managed for sustainable irrigation activities to persist.

f) Ambient air quality

All air polluting activities need to be checked regularly to minimise their effect on air quality.

g) Climate Resilience

It will be important to regularly inspect agricultural infrastructure for its resilience to climate change and variability and also any agricultural practices, if they are still relevant in the given climatic conditions.

9.2.3 Social Issues

a) Loss of natural and cultural heritage

The rehabilitation/construction of roads and Value addition infrastructure may affect some natural features, antics and relics in the programme area. Measures must be put in place for chance finds and any such incidences must be treated as required by the relevant Act.

b) Socio-Cultural Issues

Regular health checks of the work force/farmers are a way to monitor disease patterns of the members of the community to ensure that no new strains of diseases are being introduced.

c) Noise and Vibrations

It will be important to routinely monitor noise levels from the machinery to ensure that it conforms to the limits recommended for noise levels.

9.3 GENERAL

It is recommended that all environmental parameters mentioned above be monitored during the implementation and operation stages and any impacts should be mitigated as soon as possible. The farmers and the TRADE PMU should monitor on a periodic basis.

In the course of monitoring, if and when any significant impacts are detected, the monitoring team should meet and address the issue. All team members should keep records of such meetings.

9.4 THE MONITORING PLAN

The Monitoring Plan is summarized in Table 9-1 below.

Table 9-1 Monitoring Activities and Indicators

ISSUE	METHOD OF MONITORING	AREAS OF CONCERN	POSITIVE INDICATOR	FREQUENCY	RESPONSIBLE AUTHORITIES
Soils	The Developer should make a daily inspection of earth works, and ensure that slopes are suitably graded. Once earthworks are complete the Implementing Agent should monitor the restoration measures implemented by the Contractor, such as re-vegetation	<ul style="list-style-type: none"> • Soil erosion • Conservation activities • Rangelands management 	an absence of rills, gullies or other erosion features occurs	Regularly and ongoing as project is implemented	Department of Forestry
Vegetation	The farmers must clear area to be used and site works only.	<ul style="list-style-type: none"> • Clearing of the project sites and disturbance of animals. • flora and fauna 	No unnecessary vegetation cleared	Regularly and ongoing as project is implemented	<ul style="list-style-type: none"> • Department of Forestry • Department of Environmental Affairs.
Animals (Game corridors)	The farmers and the Environment Department staff should carry out regular inspections of the area and check that usual animal access routes are maintained.	<ul style="list-style-type: none"> • Game corridors • 	Usual animal access routes are maintained /not disrupted. Reduced, human, animal conflict.	Monthly and ongoing as project is implemented	<ul style="list-style-type: none"> • National parks
Birds	Interference with nesting sites	<ul style="list-style-type: none"> • Nesting sites • Migratory routes 	Reproductive patterns of birds undisturbed	Regularly and ongoing as project is implemented	<ul style="list-style-type: none"> • Department of Environmental Affairs. • Department of National Parks and Wildlife
Small mammals habitat loss	Ensure that no unnecessary habitat loss occurs.	<ul style="list-style-type: none"> • Animal habitats 	No Mammals are displaced from their habitats.	Regularly and ongoing as project is implemented	<ul style="list-style-type: none"> • Department of Environmental Affairs. • Department of National Parks and Wildlife
Poaching	Monitoring is the responsibility of the Department of National Parks and Wildlife and the Police Departments.	<ul style="list-style-type: none"> • Poaching 	Number of poaching incidences reduced or eliminated.	Regularly and ongoing as project is implemented	<ul style="list-style-type: none"> • Department of Environmental Affairs. • Department of National Parks and Wildlife • Police department
Crime	The TRADE PMU Secretariat should Liaise with police department if crime/theft becomes a problem.	<ul style="list-style-type: none"> • Criminal activities in the area 	Crime theft kept to a minimum. Incidences of stock theft and house breaking minimized.	Regularly and ongoing as project is implemented	<ul style="list-style-type: none"> • Department of National Parks and Wildlife • Police department • District Administrator
Noise	Noise monitoring should be carried out on an ad-hoc basis by the Environmental Monitor or the TRADE Secretariat to establish noise levels in the work areas.	<ul style="list-style-type: none"> • Noise Levels 	Noise levels at the nearest sensitive receiver would be kept to a minimum.	Regularly and ongoing as project is implemented.	<ul style="list-style-type: none"> • Ministry of Health • Department of Environmental Affairs.

ISSUE	METHOD OF MONITORING	AREAS OF CONCERN	POSITIVE INDICATOR	FREQUENCY	RESPONSIBLE AUTHORITIES
Health	TRADE Secretariat must ensure that education and awareness campaigns are implemented. The Ministry of Health, local authority should carry out awareness campaigns on irrigation scheme related diseases, (water-borne diseases) and carry out vector control methods such as regular spraying of potential breeding sites (ponds) TRADE Secretariat must mainstream HIV/AIDS issues into the project implementation programme.	<ul style="list-style-type: none"> Public health Ensure that stagnant water is sprayed to destroy mosquito larvae. Waste management at Sub-project sites. Disease outbreak due to concentration of people at the Sub-project sites. Disease outbreak due to dust and water pollution. Control and management of various animal diseases 	<p>Reduction in number of cases of such diseases as Avian flu, foot and mouth, AIDS/STD related diseases recorded at hospital and medical clinic</p> <p>Reduction in number of diseases such as malaria and cholera</p>	Regularly and ongoing as project is implemented	<ul style="list-style-type: none"> Health ministry TRADE PMU MoAFS
Archaeology	This should concentrate on chance finds. Provision should be made to allow archaeologists to be present on site during the excavation periods if they so wish. The TRADE Secretariat should inspect all excavations, and where archaeological remains are found work must stop until the TRADE Secretariat has given the all clear to proceed. The TRADE Secretariat should contact the Museums Authorities in the event of a significant archaeological find.	<ul style="list-style-type: none"> Archaeological Findings 	<p>Archaeological remains not excavated, disturbed or destroyed.</p>	<ul style="list-style-type: none"> Regularly and ongoing as project is implemented Room for chance finds 	<ul style="list-style-type: none"> Department of National Museums.
Energy	The Developer must inspect the provisions made by the Contractor to supply energy to the workforce, and ensure that fuel wood is not being collected. The Environmental Department should enforce legislation which prohibits cutting down of trees. The Environmental Department, TRADE Secretariat and local leadership (cultural and political) should sensitize the workers against cutting down of trees.	<ul style="list-style-type: none"> Types of energy sources used in the project 	<p>Energy supplied by electric generator or other suitable source.</p> <p>Deforestation and resultant erosion controlled and reduced</p>	Regularly	<ul style="list-style-type: none"> Department of Forestry. Department of Environmental Affairs.
Air Pollution	Observations should be made on the level of dust generated during the Agricultural Activity implementation by the Environmental Monitor or TRADE Secretariat. Dampening should be carried out if levels are unacceptable.	<ul style="list-style-type: none"> Levels of dust emissions 	<p>Deposition of dust on surfaces should decrease with increased dampening</p>	Regularly	<ul style="list-style-type: none"> Health ministry Project TRADE PMU MoAFS
Water resources	<ul style="list-style-type: none"> Water resources should be managed well The Ministry of Health should test borehole water quality in the area to ascertain the suitability for human consumption. 	<ul style="list-style-type: none"> Watercourses and impoundments. Surface water quality Ground Water Quality Recommended distances from watercourses. 	<ul style="list-style-type: none"> Water made available for environmental concerns. Pollution of water resources monitored/detected early and remedial measures taken on time 	Tests for water pollution to be done regularly	<ul style="list-style-type: none"> Health ministry Project TRADE PMU MoAFS Department of Water Development, (DWD) Department of Environmental

ISSUE	METHOD OF MONITORING	AREAS OF CONCERN	POSITIVE INDICATOR	FREQUENCY	RESPONSIBLE AUTHORITIES
		<ul style="list-style-type: none"> Possible dam construction sites. 			Affairs.
Landscape	The TRADE Secretariat should make visual inspection of earth works to ensure that excessive excavation is not being carried out. Temporary screening may be appropriate in some cases.	<ul style="list-style-type: none"> Visual intrusions Aesthetics 	Landscape alteration reduced to a minimum	Monthly	<ul style="list-style-type: none"> Department of National Museums Department of Environmental Affairs.
Complaints	The TRADE Secretariat should inspect the record of complaints made by local residents, to be kept by the farmers, and should check that action is taken quickly and that the number of complaints do not rise significantly.	<ul style="list-style-type: none"> Complaints 	Number of complaints decreases.	Regularly	<ul style="list-style-type: none"> Project TRADE PMU MoAFS Department of Environmental Affairs.
Local governance	MLGC to ensure the following <ul style="list-style-type: none"> compliance to designs Employment opportunities and recruitment are transparent. Allocation of land is overboard Cultural values are respected. 	<ul style="list-style-type: none"> Land management Land allocations Socio cultural issues Local governance Social Aspects, Land rights 	<ul style="list-style-type: none"> Disputes over land reduced Cooperation of local leadership is secured Locals employed in the projects 	Regularly	<ul style="list-style-type: none"> Ministry of Local Government District Councils Project TRADE PMU MOAFS
Agricultural Activities	<ul style="list-style-type: none"> Ensure that Agricultural Activities follow designs and recommendations given for proper agricultural practices. Ensure overall management of the Programme. Appropriate land use downstream is done and no pollution of crops from contaminated water from spillages occurs. 	<ul style="list-style-type: none"> Siting of works, plan 	Land degradation curbed Program running smoothly	Regularly	<ul style="list-style-type: none"> TRADE PMU MoAFS

10. CAPACITY BUILDING AND TRAINING FOR E&S MANAGEMENT

Although the Ministry of Local government will be the Lead Implementing Ministry, the TRADE Programme will be implemented by 5 Ministries as mentioned in Chapter 2, but coordinated by a PMU that will be housed in Ministry of Local Government. The institutions will be assessed in terms of capacity of the institutions to carry out ESMF recommendations.

The following is an outline of the capacity building and training needs for environmental and social management for TRADE.

10.1 CAPACITY BUILDING NEEDS

The successful implementation and monitoring of the environmental and social management framework, environmental and social management plans (ESMPs) and pest management plan (PMP) will require that target groups and stakeholders who play a role in the implementation of the ESMF be provided with appropriate training and awareness. This is necessary because the implementation of the activities will require inputs, expertise and resources which will be adequately taken care of if the concerned parties are well trained. These groups are described below.

Currently there is little capacity within the Ministry of Local Government or Agriculture to implement environmental and social requirements necessary to manage the potential environmental and social risks and impacts resulting from the proposed agricultural activities for TRADE.

i. National Level

The TRADE PMU will be responsible for completing the Environmental and Social Screening Form (Appendix 1) to be able to identify and mitigate the potential environmental and social impacts of rolling out the various value chains. In the event that a project activity under TRADE falls under the listed projects in the Environmental Law, TRADE and Ministry of Local Government will review the recommendations from the District and undertake the process of seeking the approval of the EIA through the Environmental Affairs Department. In addition, strategic decisions on the direction of rolling out the value chains will be undertaken at this level, and therefore those decision makers must be aware of potential risks and impacts. The groups that will need training will include:

- PMU coordinator and management
- Ministry of Agriculture staff
- Ministry of Local Government staff
- TRADE Steering Committee
- Other collaborating institutions.

ii. Area and District (Local) Level

At District and local level, the groups that will receive environmental and social training in various topics including agriculture facility management, pest management, pesticide management, HIV/AIDS awareness, water management, crop management include:

- District Agricultural Office Team
- District Environment Units
- Extension workers in project impact areas
- District environmental officers
- District agricultural officers
- Farmers
- Farmers associations
- Store keepers
- Pesticide transporters
- Pesticide users
- Agro-dealers
- Waste management firms

10.2 TRAINING REQUIREMENTS

The proposed TRADE activities will be numerous and challenging. Successful implementation of the programme activities will require dynamic and multi-disciplinary professionals. Therefore, regular short and tailor-made training courses and seminars will be required to reinforce the capacity and skills of the stakeholders and farmers during the entire project period. Training activities and target groups are presented in Table 10-1 below.

The stakeholders have different training needs as follows:

- Awareness raising will cause the participants to acknowledge the significance or relevance of the issues, but without in-depth knowledge of the issues;
- Sensitization will cause the participants to be familiar with the issues to the extent of demanding precise requirements for further technical assistance;
- Comprehensive training will raise the participants to a level of being able to train others and to competently take action on environmental and social issues in their areas.

Training and seminars will also be required for building capacity and awareness in social and environmental issues including effects of deforestation and soil erosion. Table 10-1 below provides costs estimates for the identified capacity building activities. The basis of the estimates is on some of the following:

- Prevailing costs of goods and services offered in typical urban or rural areas.
- An average number of 50 people for District Agricultural Office team
- An average number of 50 people for a local level team.
- The length of training sessions will depend on the course and will vary from 1 day to about 2 weeks.
- The estimated costs include training costs/fees, hire of rooms, food for participants, per diems, and transport costs. Training subsistence allowances have been estimated at \$30.00 per participant per day while a lump sum of \$ 45 00.00 has been included for each training session to cover the costs of the trainer.

Table 10-1 Environmental and Social Training

No.	TRAINING ACTIVITY	TARGET GROUP / TRAINER	MEANS OF VERIFICATION	COST ESTIMATES
1.	<p>Environmental and Social Risks and Impacts of TRADE</p> <ul style="list-style-type: none"> - TRADE and linkage to Safeguards policies - Typical issues - Mitigation requirements - Management plans - Monitoring requirements - Management review - Budgeting for E&S risk management 	<ul style="list-style-type: none"> • 5 Ministries, • EAD, • PMU coordinator and management • Sub-project management • District Agriculture Technical Committee • Other collaborating institutions. <p><u>TRAINER: Dept. of Environment OR PRIVATE CONSULTANT</u></p>	<ul style="list-style-type: none"> • 30 high level decision makers, managers, coordinators trained 	<p>\$ 15,000.00 one session during the entire project period)</p> <p>Length: 1 day</p>
2.	<p>Environmental and Social Impact Assessment of the Projects:</p> <ul style="list-style-type: none"> - Screening process. - Use of checklists - Preparation of terms of reference. - Identification of Impacts - ESIA report preparation and processing - Policies and laws in Malawi - IFAD safeguard policies 	<ul style="list-style-type: none"> • District Agricultural Office Team • District Environment Units • Extension workers in project impact areas. <p><u>TRAINER: Dept. of Environment OR PRIVATE CONSULTANT</u></p>	<ul style="list-style-type: none"> • 10 members of District Agricultural Office Team are trained. • 10 District Environment Units members are trained. • 10 Extension workers in project impact areas trained. 	<p>(Three sessions during the entire project period)</p> <p>Length: 5 days per session</p> <p>Total cost: \$ 25,000.00</p>
	8800.00 for the project.	<ul style="list-style-type: none"> • Farmers • Trial farm management committee • District Councils and Extension workers • <u>TRAINER: MINISTRY OF ENVIRONMENT</u> 	<ul style="list-style-type: none"> • 10 members of trail farm management committee • 10 Extension Workers • 30 Farmers from various trial farms trained 	<p>(Four sessions during the entire project period)</p> <p>Venue: Farms</p> <p>Length: 5 days per session</p> <p>Total cost: \$8,800.00</p>
3.	<p>Integrated Pest Management</p> <ul style="list-style-type: none"> - Types of pests - Identification of pests - Biological control of pests - Physical control of pests - Chemical (pesticide) control - Environmental control 	<ul style="list-style-type: none"> • Farmers • Trial farm management committee <p><u>TRAINER: MINISTRY OF AGRICULTURE</u></p>	<ul style="list-style-type: none"> • 10 members of trail farm management committee • 10 Extension Workers • 30 Farmers from various trial farms trained 	<p>(Four sessions during the entire project period)</p> <p>Venue: Farms</p> <p>Length: 5 days per session</p> <p>Total cost: \$15,000.00</p>
4.	<p>Facilitate Gender, HIV/AIDS awareness</p> <ul style="list-style-type: none"> - Impacts of HIV/AIDS on social wellbeing, livelihood and projects - Mitigation measures - Care of victims 	<ul style="list-style-type: none"> • Extension workers in project impact areas • Farmers. <p><u>TRAINER: NAC, MASA</u></p>	<ul style="list-style-type: none"> • 10 Extension workers in project impact areas trained. • 30 Farmers from various trial farms trained 	<p>TO USE NAC RESOURCES (Two sessions during entire project period)</p> <p>Venue:</p> <p>Length: 5 days</p> <p>10,000.00</p>
5.	<p>Water Management</p> <ul style="list-style-type: none"> - When to irrigate - How much water to apply - For how long - Water rights <p>Crop Management</p> <ul style="list-style-type: none"> - Crop selection - Crop rotations - Cropping calendar - How to apply fertilizer 	<ul style="list-style-type: none"> • Extension workers and Farmers • Extension workers and Farmers <p><u>TRAINER: PRIVATE CONSULTANT OR MASA</u></p>	<ul style="list-style-type: none"> • 10 Extension Workers • 30 Farmers from various trial farms trained 	<p>(Four sessions during the entire project period)</p> <p>Venue: Farms</p> <p>Length: 5 days per session</p> <p>Total cost: \$ 20,000.00</p>

No.	TRAINING ACTIVITY	TARGET GROUP / TRAINER	MEANS OF VERIFICATION	COST ESTIMATES
	<ul style="list-style-type: none"> - Use of organic manure / compost - Weeding - Crop harvesting & storage 			
6.	<p>Pesticide Management</p> <ul style="list-style-type: none"> - Pesticides Types and Use - Packaging, labelling and Handling - Storage, Stacking and Release - Pesticides Record Maintenance <p>Pesticides Procurement</p> <ul style="list-style-type: none"> - Identification of Pesticide Dealers - Pesticides Handling & Transportation - Record Maintenance <p>Pesticides Application and Disposal</p> <ul style="list-style-type: none"> - Types and Handling of Equipment - Pesticides Toxicity - Safety of Applicators (OSHA) - First Aid - Care, Cleaning and Disposal of Pesticides and Equipment 	<ul style="list-style-type: none"> • Store Keepers • Pesticide Transporters • Pesticide Users • Agro-dealers • All Farmers • Trial Farm Management Committee <p>TRAINER: MINISTRY OF AGRICULTURE</p>	<ul style="list-style-type: none"> • 10 members of Scheme Procurement Committee Trained • 10 Extension Workers • 30 Farmers from various trial farms trained 	<p>(Three sessions for the entire project period)</p> <p>Venue: Farms</p> <p>Length: 5 days per session</p> <p>Total cost: \$15,000.00</p>
7.	<p>Maintenance of the Agricultural Facilities</p> <ul style="list-style-type: none"> - Detecting the damaged structures - Materials needed to maintain the damaged structures <p>Hygiene and Sanitation</p> <ul style="list-style-type: none"> - Water supply - Sanitation - Water and sanitation related diseases - Infrastructure needed on the scheme for sanitation enhancement 	<ul style="list-style-type: none"> • Extension workers and Farmers • Extension workers and Farmers • Agro-processors <p>TRAINER: PRIVATE CONSULTANT OR MASA</p>	<ul style="list-style-type: none"> • 10 Extension Workers • 30 Farmers from various trial farms trained 	<p>(Two sessions during the entire project period)</p> <p>Venue: The farms</p> <p>Length: 5 days per session</p> <p>Total cost: \$ 40,000.00</p>
8.0	<p>Agro-facility Management</p> <ul style="list-style-type: none"> - disposal of wastes, - biosafety, - security, emergency response. 	<ul style="list-style-type: none"> • Agro facilities, e.g. warehouses, etc • 	<ul style="list-style-type: none"> • 15 Extension Workers • 	<p>(Two sessions during the entire project period)</p> <p>Venue: research laboratories</p> <p>Length: 5 days per session</p> <p>Total cost: \$5,000.00</p>
9.0	<p>Processing facility Management</p> <ul style="list-style-type: none"> - disposal of wastes, - biosafety, - security, emergency response. 	<ul style="list-style-type: none"> • Agro processors • 	<ul style="list-style-type: none"> • 15 Extension Workers • 15 Processors 	<p>(Two sessions during the entire project period)</p> <p>Venue: research laboratories</p> <p>Length: 5 days per session</p> <p>Total cost: \$5,000.00</p>
9.	TOTAL ESTIMATED BUDGET			158,800.00

10.3 PROPOSED APPROACH IN EXECUTING TRAINING ACTIVITIES

TRADE will adopt a strategy of running workshops and refresher courses to disseminate the SECAP related studies and reports. It will also use the training of trainers and community exchange visits approach.

It will be important that key decision makers, the PMU coordinator and management staff and other high-level persons are sensitized in the potential environmental and social risks and impacts due to the proposed TRADE

activities, in particular the roll out of the various value chain activities to be conducted in the project areas. This training may be conducted by a private consultant or by the Environmental Affairs Department .

The training activities in Environmental and Social Impact Assessment can be conducted by the Environmental Affairs Department or private consultants under the supervision of EAD. This will have to be done at the beginning of the programme, before the activities start, so that the participants are ready in time to apply the knowledge during implementation of the activities. Skills in the screening process will be very useful for assessing the environmental and social implications of the programme activities before they start.

Pest Management and Pesticide Management training activities will be implemented by Ministry of Agriculture and TRADE who have the requisite knowledge of types of pesticides and their application. They also have the practical knowledge and experience with different pest and pesticides. The training may be conducted during the early stages of the programme activities but before that first planting season. This training should be executed twice during the programme life, preferably at the beginning and at mid-term.

Training in Planning and Implementation should be done before any programme activities start in order to prepare the participants to use their knowledge during implementation. The training should be done at least once during the programme life. Private consultants may be able to conduct the training.

The HIV/AIDS awareness campaigns would be conducted by the AIDS Council under their planned national activities. The Ministry of Agriculture is already collaborating with the AIDS Council on programmes that have already been drawn up. This training activity should be conducted at the beginning of the programme activities and annually thereafter.

Agricultural Technology and Management; Water Management; Crop Management, waste management Procurement, Marketing and Financial training would be facilitated internally by TRADE with the assistance from the Department of Agriculture or the appropriate private consultants would have to be engaged to carry out the training. These training activities should be conducted at the beginning of the operation phase, soon after construction activities, to take advantage of the farming activities for practical training.

The management of agricultural facilities requires the application of management plans and standard operating procedures to ensure all aspects of safety, security and environmental and social compliance.

10.4 FUNDING REQUIREMENTS FOR ENVIRONMENTAL AND SOCIAL TRAINING

The proposed environmental training activities for the programme will be funded directly by the programmeresources in accordance with the proposed plan laid out in Table 10-1 above.

11. FUNDING ARRANGEMENTS

11.1 FUNDING FOR THE ENVIRONMENTAL MANAGEMENT ACTIVITIES

The proposed environmental activities for the programme will be funded directly by the programme resources in accordance with the proposed plan laid out below.

The following is a breakdown of the cost estimates for the activities in the environmental and social management plan. This detailed budget is meant for implementing and monitoring the recommended mitigation measures throughout the project life. **The budget must be integrated into the overall programme costs to ensure that the proposed mitigation measures are actually implemented.**

11.2 TECHNICAL ASSISTANCE

This component comprises specific environmental assessment studies (of a specialised nature) to determine impacts of particular agricultural activities on the environment as the project progresses

Table 11-1 Technical Assistance Budget

No.	ACTIVITY	ESTIMATED COST (US \$)
1.0	environmental assessment studies	80,000.00
	Sub-Total	80,000.00

11.3 SITE-SPECIFIC ESIAs AND ESMPs

This component will comprise Mitigation issues to do with Site-specific ESIAs, ESMPs and the Environmental License fees for registering these EA studies with the Department of Environmental Affairs.

Category A sub-projects will require a full ESIA to be produced before sub-project commencement. This will affect such sub-projects as road rehabilitation over more than 10 km stretches and the construction of agro-structures like warehouses. These sub-projects are likely to pose significant or adverse environmental and social impacts and will require an ESIA, ESMPs and Monitoring Plans to be developed to mitigate risks associated with these activities.

Category B sub-projects will require a simplified ESIA or just an ESMP. These are sub-projects that may have some adverse environmental and/or social impacts on human populations or environmentally significant areas, but the impacts are less adverse than those for Category A; are site-specific and few are irreversible in nature; and can be readily remedied by appropriate preventive actions and/or mitigation measures. The majority of the proposed programme interventions in TRADE will fall under category "B" since they will be operations for small scale and emerging farmers who cannot handle real large schemes.

Category C projects generally do not require additional environmental analysis because the activities have positive environmental impacts, or negligible or minimally adverse environmental impacts.

Table 11-2 Site-specific ESIA and ESMPs Budget

No.	ACTIVITY	ESTIMATED COST (US \$)
1.0	10 x Site-specific ESIA @ 15,000.00 each site	150,000.00
2.0	Site-specific simplified ESIA lump sum.	120,000.00
3.0	500 x Site-specific ESMPs (Trained Field Officers to train beneficiaries) lump sum.	100,000.00
4.0	Environmental License fees for all the sub-projects	150,000.00
	Sub-Total	520,000.00

11.4 MITIGATION MEASURES

This provision is for implementing mitigation measures in each district. These resources will provide for, (i) prevention of soil erosion, (ii) protection of critical natural habitats (wetlands, mountain tops, etc.), (iii) prevention of water-borne diseases, (iv) Climate change resilient activities, (v) prevention of HIV/AIDS, and (vi) Gender mainstreaming.

Mitigation and enhancement measures were discussed in detail in table 7-1 and the following is a summary of some of the measures with cost implications.

Table 11-3 Mitigation and enhancement measures Budget

No.	MITIGATION/ENHANCEMENT	ESTIMATED COST (US \$)
1.0	feasibility studies <ul style="list-style-type: none"> Site specific feasibility studies should be carried out first for the major infrastructure @ US\$ 5,000.00 each 	50,000.00
2.0	Capacity Building <ul style="list-style-type: none"> Capacity Assessment needs to be conducted before bringing infrastructure Intensive capacity building commensurate with proposed infrastructure/equipment Build Social management skills for effective leadership 	40,000.00
3.0	Stakeholder Participation <ul style="list-style-type: none"> Conduct a comprehensive participatory stakeholder mapping exercise including roles and responsibilities at national, provincial, district and local area level Conduct adequate situational assessment to determine different vulnerability dimensions. 	20,000.00
4.0	Revegetation and reforestation <ul style="list-style-type: none"> Revegetation and reforestation must be prioritized. Institute rangeland management and catchment conservation. Habitat restoration must be done where effects have been caused All altered landscapes (Sand pits, borrow pits, brick molding sites etc.) should be rehabilitated. 	30,000.00
5.0	Soil erosion control measures <ul style="list-style-type: none"> Institute measures to reduce and control soil erosion like contouring and terracing, stabilising slopes and banks, re-vegetation, reseeding of grasses, land preparation, use of gabions, etc) 	20,000.00
	Sub-total	170,000.00

11.5 MONITORING AND EVALUATION

This provision is for training both the TRADE staff and the beneficiaries in participatory environmental monitoring. This entails monitoring the implementation of mitigation measures at the sub-project level (e.g. each irrigation scheme, Value addition centre, etc.). The component will comprise:

- i) the monitoring and evaluation issues of the whole programme
- ii) Research and Development work to come up with more environmentally friendly agricultural processes for particular value chains.
- iii) Monitoring and Evaluation of the progress of the implementation of the ESMF. Assessing whether it is being effective or not.

Table 11-4 Monitoring and Evaluation Budget

No.	ACTIVITY	Estimated Cost (US \$)
1.0	Monitoring and evaluation exercises	90,000.00
2.0	Research and Development work	20,000.00
3.0	Monitoring and Evaluation work	110,000.00
	Sub-Total	220,000.00

11.6 ENVIRONMENTAL AND SOCIAL TRAINING

Environmental and Social Training were discussed in detail in table 10-1 and the following is a summary of the budgetary requirements for the proposed training activities

Table 11-5 Environmental and Social Training Budget.

No.	TRAINING ACTIVITIES	Estimated Cost (US \$)
1	High level training in Environmental and Social Risks of TRADE	15,000.00
2	Training in Environmental and Social Impact Assessment	25,000.00
3	Sensitization on environmental and social management framework and PMP	8,800.00
4	Training in Pest Management	15,000.00
5	Facilitate Gender, HIV/AIDS awareness	10,000.00
6	Water and Crop Management Training	20,000.00
7	Training in Pesticide Management	15,000.00
8	Maintenance and Hygiene and Sanitation	40,000.00
9	Agro-facility Management	5,000.00
10	Processing facility Management	5,000.00
	TOTAL	158,800.00

11.7 ANNUAL AUDITS

The project will be subjected to annual audits and an end of project audit. The following is the cost estimate for the Audits.

Table 11-6 Monitoring and Evaluation Budget

No.	ACTIVITY	ESTIMATED COST (US \$)
1.0	Bi- Annual Audit	45,000.00
2.0	End of Project Audit	40,000.00
	Sub-Total	85,000.00

11.8 ESMF IMPLEMENTATION BUDGET SUMMARY

The following is the ESMF Implementation budget summary taking into consideration all the issues covered in sections 12.1 to 12.6:

Table 11-7 Estimated Budget for ESMF Implementation (US\$)

No.	YEAR	REFERENCE TABLE	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
	ACTIVITY							
1	Technical Assistance (Environmental assessment studies)	Table 11-1	40,000.00	10,000.00	10,000.00	10,000.00	10,000.00	80,000.00
2	Site-specific ESIA's, ESMPs and Environmental License fees	Table 11-2	250,000.00	175,000.00	95,000.00			520,000.00
3	Mitigation Measures	Table 7-1 and 11-3	70,000.00	50,000.00	30,000.00	10,000.00	10,000.00	170,000.00
4	Monitoring and evaluation purposes (R&D, M&E, Field Visits)	Table 9-1 and table 11-4	100,000.00	70,000.00	30,000.00	10,000.00	10,000.00	220,000.00
5	Environmental and Social Training	Table 10-1 and 11-5	70,000.00	40,000.00	20,000.00	18,000.00	10,800.00	158,800.00
6	Bi-Annual Audit	11-6		15,000.00	15,000.00	15,000.00	-	45,000.00
7	End of Project Audit	11-6					40,000.00	40,000.00
Sub - Total								1,278,800.00
10% Contingency								127,880.00
Grand Total								1,361,680.00

Notes:

- Construction stage mitigation measures (Erection of Waste Treatment Systems) under the responsibility of the contractor and supervising engineer will be included in the Bills of Quantities (BoQ) estimated at 5% of the BoQ for environment and social mitigation/remediation measures.
- Specific and clearly identified budget line for environmental and social issues should be included in the tender documents
- 10% of contract value should be kept until the Environment Officer/EAD confirms that all the environmental and social mitigation measures are appropriately implemented and the Environmental Affairs Department has approved.
- There are no resettlement issues envisioned for the construction and operation of the proposed infrastructure. Should there be any resettlement issues and/or payment of compensation to the affected population, the Government of Malawi will implement the activities prior to the commencement of the civil works. The funding for such activities will come from the counterpart funding from the Government of Malawi.
- ESIA's and ESMPs will be prepared for all sub-projects which have potential significant negative impacts, and these provide cost estimates for the implementation of specific mitigation and management measures for those sub-projects.

12. IMPLEMENTATION SCHEDULE AND REPORTING

12.1 IMPLEMENTATION SCHEDULE

The implementation schedule for the ESMF is outlined in table 12-1 and takes into account all activities related to the proposed measures (enhancement and mitigation), the monitoring program, consultations, complementary initiatives and institutional arrangements.

12.2 REPORTING

To monitor the progress of the implementation of the measures that have been identified in this ESMF. Annual reviews will be carried out as outlined in Appendix 3. The principal output of the annual reviews is an **annual review report** that documents the review methodology, summarizes the results, and provides practical recommendations. Distinct sections should address: a) ESMF performance and, b) cumulative impacts. Annexes should provide the detailed results of the field work, and summarize the number of approved sub-projects by district and their characteristics according to the annual report format (see Appendix 4). Copies of the annual review report should be delivered to the TRADE Steering Committee, to each district/provincial office responsible for appraisal, approval and implementation of sub-projects, and to IFAD.

To ensure early detection of critical environmental and social conditions and to provide information on the mitigation progress and results, reporting deadlines have been specified in the implementation schedule.

Table 12-1 Implementation schedule for ESMF

No.	PROJECT ACTIVITIES		REPORTING DEADLINES	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5			
1.0	Stakeholder Consultations		<ul style="list-style-type: none"> ESMF before project approval Annually at end 4th quarter 	■	■		■			■			■			■			■			■	
2.0	Review and Development of Site-specific ESMPs		End Year 1, of 1 st quarter		■	■																	
	Development of site specific ESIA's		End Year 1, of 1 st quarter																				
3.0	Development of Site-Specific Work plans		End Year 1, of 1 st quarter			■	■																
4.0	Implementation of Mitigation measures	soil and water conservation work	Annually with each planting session			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
		Monitoring the progress of the implementation of the mitigation measures	Annually at end 4 th quarter				■				■				■				■			■	
		Crop rotation /agro forestry	Annually as appropriate			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
		Provision of PPE	Continuous throughout project life			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
		Dust suppression measures	During Construction and throughout whenever and where dust is generated.			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
		Mainstream Gender and HIV/AIDS issues				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
5.0	Watershed Management	Habitat restoration	By end of 4 th quarter year one and refresher cause annually.			■	■	■	■	■	■			■				■			■		
		Revegetation/reforestation	By end of 4 th quarter year one and continually as need arises			■	■	■	■	■	■			■				■			■		
		Stabilisation of loose soil in fields	By end of 3 rd quarter year one and continually as need arises			■	■	■	■	■	■			■				■			■		
		River bank stabilisation/training	By end of 4 th quarter year one			■	■	■	■	■	■												
		Appropriate waste disposal facilities	By end of 3 rd quarter year two							■	■	■	■										
		Soil erosion control measures	By end of 3 rd quarter year two and continuously thereafter as need arises.							■	■	■	■			■			■			■	
		Restoration of burrow pits	By end of 4 th quarter year three									■	■	■	■	■	■						
		Allow for environmental flows	By end of 2 nd quarter year two and continuously thereafter.							■	■	■	■			■			■			■	
6.0	Promotion of Waste Management	waste handling, land & water mgnt training	By end of 4 th quarter year One.							■	■												
		general amenities	By end of 2 nd quarter year two							■	■	■	■										
		Production of Organic Manure	Continuous Once production starts							■	■	■	■	■	■	■	■	■	■	■	■	■	
		Appropriate containment measures	By end of 3 rd quarter year one			■	■	■	■	■	■												

13. CONCLUSIONS AND RECOMMENDATIONS

The proposed TRADE programme has potential to significantly improve smallholder production, productivity and income in the target Districts. An improvement in the income of the Smallholder farmers will translate to improved food security as they now will have cash to secure other needs. The implementation of TRADE will provide considerable economic opportunity for material/equipment suppliers, construction contractors and agriculture professionals.

The envisaged environmental and social impacts include disturbance of soil from digging of pits and foundations, and irrigation and value addition infrastructures construction activities, Solid and liquid waste generation, tree cutting and general vegetation clearing, emission of dust and generation of noise, employment creation, etc. **These envisaged environmental impacts will generally be localized, minimal, short term and can be mitigated.** However, this will entail incorporating the requisite waste and effluent handling units to the facilities and adhering to the requirements of the current ESMF. **The Final benefits of this programme to the nation will, by far outweigh potential negative effects.**

It is therefore recommended that:

- All agricultural and value addition infrastructure must include the requisite waste disposal or handling systems.
- The choice and type of construction materials and finish should maximize the blending concept.
- It is important that stakeholder organisations such as District Commissioners, Department of Environmental Affairs, NGOs and other interested parties are consulted and kept informed of the implementation progress so that they can play their part.
- Reduction and control of noise levels to minimize any disruption to the living conditions of wildlife be strictly adhered to.
- The land around any sub-project works should be left intact and pollution be minimised.
- Bush clearance should be confined to the absolutely necessary part, buffer strips be maintained and huge indigenous trees in the area should be preserved as much as possible.
- Labour intensive methods should be encouraged as they benefit the local community in terms of job creation. For this the project should employ locals as much as possible to ensure that benefits remain in the area where development is taking place.
- The use of destructive machinery should be avoided as much as possible. Machinery will adversely affect soils and undergrowth.
- The recommended mitigation measures should be implemented to reduce significant environmental impacts.

The programme overall will not have any apparent significant environmental impacts if the recommended mitigations are carried out.

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15. APPENDICES

APPENDIX 1 ENVIRONMENTAL AND SOCIAL SCREENING FORM



Government of Republic of Malawi

Environmental & Social Screening Form

(Guidelines: Site inspection of project site. The evaluation results to be a consensus of at least three officials)

Project Name:	District:
Project Location TA: GVH:	Name of Catchment
Name of Village:	Nature/Size:
Name, Signature & Designation of Evaluator(s): 1..... . 2.....	Date of Field Evaluation:
	Sector

		Appraisal		Significance			Potential Mitigation Measures
		Yes	No	Low	medium	high	
1.0	Environmental and Social Screening						
	Will the project generate the following negative impacts						
1.1	Loss of trees/vegetation						
1.2	Soil erosion/siltation in the area						
1.3	Pollution to land- e.g. from diesel, oils						
1.4	Dust emissions						
1.5	Solid and liquid wastes e.g. open defecation						
1.6	Spread of HIV/Aids and other STI						
1.7	Borrow pits and pools of stagnant water						
1.8	Rubble/heaps of excavated soils						
1.9	Alien / Invasive species						
1.10	Spread of water borne diseases e.g. Malaria						

APPENDIX 2 ENVIRONMENTAL AND SOCIAL FIELD APPRAISAL FORM

NAME OF PROJECT

Application Number:

PART 1: IDENTIFICATION

1. **Project Name:** (for example: Rehabilitation of Kasungu Irrigation scheme – Kasungu District)

2. **Project Location:** (for example: Kasungu District)

3. **Reason for Field Appraisal:** Summarize the issues from the Screening form that determine the need for a Field Appraisal.

4. **Date(s) of Field Appraisal:**

5. **Field Appraisal Officer and Address:**

6. **Extension Team Representative and Address:**

7. **Community Representative and Address:**

PART 2: DESCRIPTION OF THE PROJECT

8. **Project Details:** Provide details that are not adequately presented in the sub-project application. If needed to clarify sub-project details, attach sketches of the sub-project component(s) in relation to the community and to existing facilities.

PART 3: ENVIRONMENTAL AND SOCIAL ISSUES

9. **Will the project:**

Yes No

* Need to acquire land?

* Affect an individual or the community's access to land or available resources?

* Displace or result in the involuntary resettlement of an individual or family?

If "Yes", tick one of the following boxes:

- The Resettlement Action Plan (RAP/ARAP) included in the sub-project application is adequate. No further action required.
- The RAP/ARAP included in the sub-project application must be improved before the application can be considered further.
- An RAP/ARAP must be prepared and approved before the application can be considered further.

10. **Will the project:**

Yes No

* Encroach onto an important natural habitat?

* Negatively affect ecologically sensitive ecosystems?

If "Yes", tick one of the following boxes:

- The Environmental and Social Management Plan (ESMP) included in the sub-project application is adequate. No further action required.
- The EMP included in the sub-project application must be improved before the application can be considered further.
- An EMP must be prepared and approved before the application can be considered further.

11. **Will this project involve or introduce pesticides?**

Yes No

If "Yes", tick one of the following boxes:

- The Pest Management Plan (PMP) included in the sub-project application is adequate. No further action is required.

- The PMP included in the sub-project application must be improved before the application can be considered further.
- A PMP must be prepared and approved before the application can be considered further.

12. Will this project involve or result in: **Yes No**

- * Diversion or use of surface waters?
- * Production of waste (e.g. slaughterhouse waste)?
- * New or rebuilt irrigation or drainage systems?

If "Yes", tick one of the following boxes:

- The application describes suitable measures for managing the potential adverse environmental effects of these activities. No further action required.
- The application does not describe suitable measures for managing the potential adverse environmental effects of these activities. An ESMP must be prepared and approved before the application is considered further.

13. Will this project require the construction of a small dam or weir? **Yes No**

If "Yes", tick one of the following boxes:

- The application demonstrates that the structure(s) will be designed by qualified engineers, and will be built by qualified and adequately supervised contractors. No further action is required.
- The application does not demonstrate that the structure(s) will be designed by qualified engineers, and will be built by qualified and adequately supervised contractors. The application needs to be amended before it can be considered further.

14. Will this project rely on water supplied from an existing dam or weir? **Yes No**

If "Yes", tick one of the following boxes:

- The application demonstrates that a dam safety report has been prepared, the dam is safe, and no remedial work is required. No further action is required.
- The application does not demonstrate that a dam safety report has been prepared, the dam is safe, and no remedial work is required. A dam safety report must be prepared and approved before the application is considered further.

15. Are there any other environmental or social issues that have not been adequately addressed?

Yes No

If "Yes", summarize them:

and tick one of the following boxes:

- Before it is considered further, the application needs to be amended to include suitable measures for addressing these environmental or social issues.
- An ESMP needs to be prepared and approved before the application is considered further.

PART 4: FIELD APPRAISAL DECISION

- **The sub-project can be considered for approval.** Based on a site visit and consultations with both interested and affected parties, the field appraisal determined that the community and its proposed project adequately address environmental and/or social issues as required by the ESMF.
- **Further sub-project preparation work is required before the application can be considered further.** The field appraisal has identified environmental and/or social issues that have not been adequately addressed. The following work needs to be undertaken before further consideration of the application:

All required documentation such as an amended application, ESMP, RAP/ARAP, or PMP will be added to the sub-projects file before the sub-projects is considered further.

Name of field appraisal officer (print):

Signature: **Date:**

APPENDIX 3 GUIDELINES FOR ANNUAL REVIEWS

Objectives: The objectives of annual reviews of ESMF implementation are two-fold:

- a) *To assess Project performance in complying with ESMF procedures, learn lessons, and improve future performance; and*
- b) *To assess the occurrence of, and potential for, cumulative impacts due to TRADE-funded and other development activities.*

The annual reviews are intended to be used by *TRADE* management to improve procedures and capacity for integrating natural resources and environmental/social management into project operations. They will also be a principal source of information to IFAD supervision missions.

Scope of Work: ESMF Performance Assessment

The overall scope of the performance assessment work is to:

- a) Assess the adequacy of the sub-project approval process and procedures based on interviews with project participants, project records, and the environmental and social performance of a sample of approved sub-projects;
- b) Assess the adequacy of ESMF roles and responsibilities, procedures, forms, information resource materials, etc.;
- c) Assess the needs for further training and capacity building;
- d) Identify key risks to the environmental and social sustainability of sub-projects; and
- e) Recommend appropriate measures for improving ESMF performance.

The following tasks will be typical:

- a) Review district records of sub-projects preparation and approval (e.g. applications; screening checklists; ESMPs, RAP/ARAPs and PMPs appraisal forms; approval documents), monitoring reports as well as related studies or reports on wider issues of natural resources and environmental management in the country;
- b) On the basis of this review, conduct field visits of a sample of approved sub-projects to assess the completeness of planning and implementation work, the adequacy of environmental/social design, and compliance with proposed mitigation measures. The sample should be large enough to be representative and include a substantial proportion of sub-projects that had (or should have had) a field appraisal according to established ESMF criteria (see Section 7.2 The Screening Process). Sub-projects in sensitive natural or social environments should especially be included.
- c) Interview project and district officials responsible for sub-projects appraisal and approval to determine their experience with ESMF implementation, their views on the strengths and weaknesses of the ESMF process, and what should be done to improve performance. Improvements may concern, for example, the process itself, the available tools (e.g. guidelines, forms, and information sheets), the extent and kind of training available, and the amount of financial resources available.
- d) Develop recommendations for improving ESMF performance.

Cumulative Impacts Assessment

This part of the annual review assesses the actual or potential cumulative impacts of sub-projects with other sub-projects or development initiatives on the environment, natural resources and community groups. Cumulative impacts result from a number of individual small-scale activities that, on their own, have minimal impacts, but over time and in combination generate a significant impact. For example:

- * Decline in groundwater levels or quality due to the construction of numerous wells and the introduction of numerous small-scale irrigations works;
- * Overwhelmed or illegal waste and dumping sites due to the inappropriate disposal of increasing amounts of waste materials;
- * Illegal poaching of wildlife due to expansion of land under cultivation or increased proximity and access to protected areas through construction of small access roads; and

- * Attraction of large migrant populations to communities that have successfully introduced improve social infrastructure (such as schools, health centers or water sources) resulting in overcrowding, depletion of resources (e.g. space, supplies, water), etc.

The function of this assessment is primarily as an "early warning" system for potential cumulative impacts that might otherwise go undetected and unattended to. It will be largely based on the observations of people interviewed during the field work, and trends that may be noticed by district or regional officials. Where cumulative impacts are detected or suspected, recommendations will be made to address the issue, perhaps through more detailed study to clarify matters and what should or can be done about them.

Qualifications for Undertaking Annual Reviews:

The reviews should be undertaken by an individual or small team with training and experience relevant to the likely issues to be encountered (e.g. environmental and natural resources management and land acquisition and resettlement). They should also be familiar with the methods and practices of effective community consultation, and with typical methods and processes for preparing, appraising, approving and implementing small-scale community development projects.

Timing:

Annual reviews should be undertaken after the annual monitoring report has been prepared and before IFAD supervision of the project, at the closing of each year of the project. It is expected that each review would require 3-4 weeks of field work (interviews, examination of sub-projects), and that the review report would be completed within 2 weeks of completing the field work.

Outputs:

The principal output is an **annual review report** that documents the review methodology, summarizes the results, and provides practical recommendations. Distinct sections should address: a) ESMF performance and b) cumulative impacts. Annexes should provide the detailed results of the field work, and summarize the number of approved sub-projects by district and their characteristics according to the annual report format (see Appendix 4). Copies of the annual review report should be delivered to *TRADE* Steering Committee, to each district/provincial office responsible for appraisal, approval and implementation of sub-projects, and to IFAD. The Provincial Review Panel may also want to host national or district workshops to review and discuss the review findings and recommendations.

APPENDIX 4 GUIDELINES FOR ANNUAL REPORT

Name of the Project:
(TRADE)

Application Number:

1. Name of District or Local Government:
2. Name and Position of Review Authority Completing the Annual Report:
3. Reporting Year:
4. Date of Report:
5. Community Sub-project (s):

Please enter the numbers of sub-projects in the following table.

Types of Activities	Approved this year	Application included an ESMF checklist					
			Field Appraisal	EMP	PMP	RAP/ARAP	Specific TA
Water Supply							
Water point rehabilitation							
Earth dam rehabilitation							
Community reservoirs							
Small dams							
Water harvesting facility							
Gravity water schemes							
Roads and Energy							
Tertiary/secondary roads							
Tertiary/secondary road culverts/bridges							
Footpaths							
Agriculture and markets							
Terracing							
Agro-processing facilities							
Post-harvest handling facilities							
Market places							
Natural resources management							
Anti-erosion interventions and soil fertility restoration							
Démonstration/nutrition gardens							
Stream and river bank protection							
Wetland development							
Soil Conservation Works							

6. Were there any **unforeseen environmental or social problems** associated with any sub-project approved and implemented this year? If so, please identify the sub-project (s) and summarize the problem (s) and what was or will be done to solve the problem (s). Use a summary table like the one below.

Sub-project	Problem(s)	Actions taken	Actions to be taken

7. Have any **other environmental or social analyses** been carried out by other public or private agencies in your district/province? If so, please describe them briefly.

.....

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

.....

9. **Training:** Please summarize the training received in your district/province in the past year, as well as key areas of further training you think is needed.

Group	Training Received	Training Needed
Review Authority		
Approval Authority		
Extension Teams		
NGOs/Associations		

APPENDIX 5 SUMMARY OF IFAD GUIDANCE STATEMENTS.

GUIDANCE STATEMENT 1 : BIODIVERSITY

Biodiversity or biological diversity refers to the full range and variety of the world's biota, and its living organisms. Biodiversity is usually considered at three levels: (i) generic, (ii) species, and (iii) ecosystem diversity. Conservation of biological diversity aims at maintaining global biological resources to meet the needs of humanity today while ensuring their availability for future generations – a fundamental criterion of sustainable development (IFAD, 2017).

Conservation of biodiversity is a cornerstone of IFAD projects, particularly those for agricultural development. Value chain development projects may also offer opportunities for preserving biodiversity by promoting the sustainable harvesting and marketing of products derived from old plant varieties and breeds (e.g. underutilized species), locally used plants (e.g. medicinal plants) and non-timber forest products. Short value chains supplied by many small producers, who use considerably more species and varieties than larger farms, are more suitable for the conservation of agrobiodiversity than long value chains served by a few large farms with monocultures. In addition, agricultural practices such as mixed cropping and agroforestry have proved beneficial for climate change adaptation and improved agricultural productivity.

IFAD does not implement projects in areas of critical habitats or which result in conversion or degradation of such habitats. Emphasis will be to identify alternatives and ensure that any potential degradation or conversion is appropriately mitigated. IFAD will protect biodiversity by designing its projects appropriately, ensuring that they are implemented sustainably with full community participation, and providing sound recommendations for improving borrowing countries' agricultural policies.

Biodiversity should be identified at an early stage of project preparation to allow for optimum integration of conservation and development objectives. The following are some of the issues to be considered in this identification process:

- Adopt an ecosystem perspective and multisectoral approach to developmental programmes;
- Promote fair and equitable sharing of costs and benefits from biodiversity conservation and sustainable use at all levels: local, national, regional and international;
- Encourage full stakeholder participation, including partnerships between civil society, government and the private sector;
- Ensure that IFAD programmes and projects are consistent with the wider policy framework, and/or changes are made for supportive policies and laws;
- Ensure that institutional arrangements are effective, transparent, accountable, inclusive and responsive;
- Provide and use accurate, appropriate, multidisciplinary information, accessible to, and understood by, all stakeholders;
- IFAD's investments should be sensitive to, and complement, local and national structures, processes and capacities;

GUIDANCE STATEMENT 2 – AGROCHEMICALS

Increased food production is one of IFAD's central objectives; the use of agrochemicals (mainly fertilizers and pesticides) may be necessary to achieve higher yields per unit area. However, the environmental and social (including health) concerns raised by such use of agrochemicals must be carefully considered (IFAD, 2017).

Agrochemicals include fertilizers, liming and acidifying agents, soil conditioners, pesticides, and chemicals used in animal husbandry such as antibiotics and hormones. The use of agrochemicals has been critical to raising crops for food. However, some of these chemicals cause substantial damage to the environment, ecology and human health, greatly reducing their net benefits.

IFAD projects promote the use of agrochemicals directly, as a project component for increased crop productivity, or – more commonly – indirectly, by increasing the availability of short-term credit for farm inputs or water for irrigation, which encourages increased use of agrochemicals.

Careful selection of the type of agrochemicals and management of their use (timing, dosage, mode of application, etc.) can reduce to acceptable levels the environmental risks they pose while providing the needed benefits for increased production with lower financial and health risk costs.

IFAD projects should strive to improve existing pesticide and fertilizer use by ensuring that the proper institutional, legal and regulatory framework is in place and that sufficient technical and managerial capacity-building is provided for the selection, application, storage, disposal and monitoring of pesticides, which are often hazardous if they are misused or handled improperly.

The use of agrochemicals can also be reduced or eliminated by promoting indigenous farming practices, such as:

- the cultivation of locally adapted crops and varieties, which are often resistant to local pests and diseases;
- the use of locally available natural biopesticides and pest-repellent crops, with adapted cultivation strategies (seeding periods and methods, etc.);
- the use of natural on-farm animal and green manure; and
- the utilisation of organic farming techniques.

Ensuring diversity in the crops and varieties cultivated on a farm, especially indigenous crops, reduces the risk of high-level pest infestations and disease epidemics and facilitates enhanced ecosystem services, including through pollinators and active soil fauna and flora.

GUIDANCE STATEMENT 3 – ENERGY

Worldwide, 2.4 billion people rely on traditional biomass such as fuelwood and charcoal for cooking; 1.3 billion people do not have access to electricity (REN21, 2012). Households expend significant proportions of their disposable incomes, time and labour on low-quality energy sources. This situation entrenches poverty, constrains the delivery of social services, limits opportunities for women, and erodes environmental sustainability at the local, national and global levels (UN-Energy, 2004).

Modern bioenergy technologies can offer a wide range of solutions that are appropriate to rural domestic energy needs (e.g. for cooking on flexi-biogas) or to energy demand for productive uses (e.g. water pumping for irrigation).

Broad and reliable access to energy allows the powering of agricultural and transport equipment, is particularly important for producers who are off the power grid or connected to an unreliable power supply, and reduces rural poverty through increased agricultural and labour productivity (IFAD, 2017).

Energy security is receiving increased attention in the IFAD portfolio, which focuses on improving access to energy for domestic, processing and farming purposes, to enhance the quality of life and living standards of poor rural people. In partnership with other entities, and in support of country-owned initiatives, IFAD explores alternative sources of energy for poor people, to reduce their dependence on fossil fuels or traditional biomass by capitalizing on opportunities to use renewable energy sources at the farm and community levels, and promoting low-cost technologies that use local resources to provide energy to rural areas.

Renewable energy is of growing interest because of its potential to diminish reliance on fossil fuels, reduce carbon emissions and mitigate climate change. For example, biogas can provide poor rural people in developing countries with clean and renewable energy all year round. The use of biogas stoves frees women from the need to collect fuelwood, enabling them to undertake other productive activities.

GUIDANCE STATEMENT 4 – FISHERIES AND AQUACULTURE

Fisheries projects can be divided in two groups: (i) capture fisheries (harvest of wild stock); and (ii) culture fisheries or fish farming (freshwater aquaculture, brackish water aquaculture and Mari culture). Capture fisheries include marine operations (offshore and near-shore) and inland operations (rivers and lakes). Fish farming

produces more fish than is normally available from wild stock, by manipulating or managing the fish and food resources (by containment in ponds or specific productive areas, creating new or improved use of natural habitats).

The demand for fish has steadily increased over the past five decades and it is no longer possible to meet this demand from wild fish stocks alone. Increased fish production can only be achieved through better management of capture fisheries resources and the aquatic ecosystem and expansion of aquaculture. Aquaculture can improve food security and diversification of livelihoods, thereby reduce households' vulnerability to natural hazards and economic uncertainty. However, aquaculture must be managed responsibly to avoid negative social and environmental impacts, including pollution, damage to aquatic biodiversity, conflicts over resource rights, and marginalization of small-scale actors (IFAD, 2017).

Climate change poses new challenges for the sustainability of fisheries and aquaculture systems all across the globe. Coastal communities are in the frontline of climate change impacts and are vulnerable to sea level rise, extreme weather events, changing distribution and abundance of fish stocks, eroding coastlines, salt water intrusion, expansion of tourism amenities, and the impacts of ocean acidification on food security and coastal resources.

IFAD's Environment and Natural Resource Management Policy (2011) explains the broad environmental objectives for IFAD fisheries and aquaculture sector interventions to: (i) strengthen fisheries management and the tenure rights of fishing communities to common pool resources; (ii) introduce ecosystem approaches for both fisheries and aquaculture; (iii) restore and develop protected areas; (iv) promote integrated coastal and marine resource management to ensure sustainable fishing practices; (v) invest in retraining and education for fishers to create alternative employment opportunities; and (vi) encourage sustainable forms of aquaculture.

The GS serves to protect the environment from the effects of both capture and fish farming which include over exploitation and habitat destruction. Through this GS, IFAD seeks to achieve the following social, economic and environmental outcomes through investments in fisheries and aquaculture:

- increase food production;
- improve nutrition for fishing and fish farming communities, surrounding communities and extending to the national level;
- increase incomes and employment opportunities, including for youth and women;
- improve the health and quality of life in fishing communities;
- increase national trade and exports of fisheries and aquaculture products;
- reduce the immigration of young fishers to urban areas;
- provide access to financial services for small-scale fishers and fish farmers;
- preserve and strengthen habitats that are important for rejuvenating fish stocks, such as mangroves and coral reefs;
- enhance access to knowledge and sustainable fisheries and aquaculture technologies;
- strengthen policies and institutions for fisheries resource management, tenure and access rights of local people; and
- enhance resilience of coastal communities against climate change and other shocks by incorporating climate change impacts in the design of new fisheries and aquaculture projects.

GUIDANCE STATEMENT 5 – FOREST RESOURCES

Forests have an important role in supporting local and global ecosystem services and providing resources to some 1.6 billion people (UNEP, 2008), due to their highly productive nature. They are used and managed for different – often competing – purposes, such as timber and fuel wood production, Non-Timber Forest Products (NTFPs) collection, watershed management, shelter and food supply for indigenous people (forest dwellers), emergency shelter and food supply for surrounding farming communities or herders, and conservation of biological diversity. Natural stands of trees and shrubs play an important supportive role in savannah pastoralism and are used as a restorative measure for fertility improvement in shifting cultivation. Tree-based production systems do not require the continuous managing of the soil (IFAD, 2017).

Forests equally have untapped potential to lift rural people out of poverty (Sunderlin, Angelsen and Wunder, 2010), providing a source of employment, income, food, energy and housing. Forest-based livelihood activities include livestock grazing, controlled hunting, and the collection of wild fruits and insects, all of which provide highly nutritious resources that can contribute to food security and alleviate dietary deficiencies.

IFAD, recognizes the importance of managing forests sustainably to reduce land degradation while improving food security and providing alternative income sources for communities and small farmers. Thus, the GS seeks to protect natural forests from destructive activities such as crop production & logging. It promotes management of natural forests by rural and indigenous communities, who can be provided livelihoods and adequate income generating activities through alternative livelihood activities such as livestock grazing, natural honey collection/production, collection of firewood, medicinal plants, wild fruits & nuts, controlled hunting, etc.

GUIDANCE STATEMENT 6 – RANGELAND-BASED LIVESTOCK PRODUCTION

Livestock production is one of the fastest growing agricultural subsectors in developing countries, Accounting for 30 per cent of agricultural gross domestic product and spurring a demand for animal-source food products that is likely to double in the next 20 years (FAO, 2002). The growth of the sector exerts some pressure on natural resources such as the rangelands for the livestock, and without adequate measures being taken, in rangeland and feed stock management, may lead to an increase in greenhouse gases and thus contribute to climate change (IFAD, 2017).

Rangelands include grasslands, woodland savannahs, open forest (and in some cases cleared areas of closed forests), shrub lands, wastelands, abandoned agricultural areas, and deserts that support domestic ruminants and wild herbivores. The targets of these range areas vary from large-scale commercial ranching to mixed farming or traditional pastoral systems. Hence, depending on the scale of the operation, different measures will be adopted. Rangeland and pastoralist activities are two areas in which IFAD is very active. These areas support a large number of herders and livestock producers, however, open-access to these areas has resulted in grave environmental consequences. Over-grazing is one of the most notorious of these impacts (others include human settlement, roads, and harvesting fuel wood) leading to a loss of surface top-soil and losses in soil fertility.

Managing the environmental and social impacts of the livestock sector requires, at a minimum, disaggregating between extensive and intensive production. In extensive livestock production, the livestock are reared outdoors on natural and semi-natural forage, and in intensive production the livestock, are reared indoors and based on cultivated inputs or by-products. The nature of the environmental impact and the appropriate environmental responses vary entirely between these two broad types of systems (McGahey et al., 2014).

These guidelines address extensive livestock production on rangeland resources, i.e. some form of pastoralism. In developing countries, it is recommended to focus on both greening the intensive livestock sector and capitalizing on the inherent sustainability of pastoralism for local, regional and international markets (McGahey et al., 2014).

The basic guidance and good practices for IFAD interventions in the management of rangeland-based livestock involve promoting and supporting: (i) integrated crop/livestock systems; (ii) development of improved, locally adapted livestock genetics, and avoidance of erosion or loss of animal genetic resources; (iii) pastoral institutions and recognition of tenure rights and customary grazing lands; (iv) strengthened local governance capacity, national governance policy and institutional coherence; (v) livestock diversity; (vi) management and recycling of livestock manure as organic nutrients for restoring soil fertility; and (vii) range restoration, enhancement and sustainable rangelands management.

The primary beneficiaries are poor livestock keepers, particularly those who are economically or socially at risk and politically marginalized, such as rural women, youth, landless poor people, and people for whom animals such as poultry and small ruminants provide, at most, subsistence or a minimum contribution to daily nutritional guidance. IFAD is committed to developing a sustainable livestock sector in which poor farmers and herders might obtain higher incomes and better access to assets, services, technologies and markets. Thus, the GS seeks to promote sustainable rangeland management curbing all these negative impacts.

GUIDANCE STATEMENT 7 – WATER (AGRICULTURAL AND DOMESTIC USE)

Many poor rural people face severe constraints in their access to adequate quantities of good quality water for domestic and agricultural uses. Clean water supplies and sanitation remain major problems in many parts of the world, with 11 per cent of the global population lacking access to safe drinking water. Agricultural production accounts for 70 per cent of global freshwater use, mainly through crop irrigation (IFAD, 2017).

In irrigation, water is managed for agricultural production. Most systems are established to improve crop yields per unit of land. Irrigation systems include: (i) water storage; (ii) water conveyance; (iii) water delivery to plants; and (iv) disposal of drainage water. Irrigation water is conveyed and delivered to plants by gravity, sprinkler or drip irrigation. The setting up of these systems impacts on the environment in many ways. Facilities for drainage of excess water are not always provided in irrigation systems which may lead to water logging and soil salinisation.

Water management in agriculture includes projects fed by surface water or groundwater and/or rainfall in irrigation, soil and water conservation, swamp rehabilitation, watershed management, water for livestock, and inland fisheries and aquaculture.

The potential negative impacts of water investments affect several environmental and social aspects and include soil degradation, water quality, public health, effects on flora and fauna and disruption of ecosystem services, particularly when introduced on a large scale. In the near future, accelerating changes in the global climate will cause major alterations in the patterns of the water cycle and the geographical distribution of water, with significant effects on agricultural activities. Climatic change will have significant consequences on water supply, water systems, infrastructure and agriculture. It could also undermine IFAD's investments and reduce the long-term sustainability of results. Therefore, FAD aims to reduce the vulnerability of water management and infrastructure to current climate variability while also considering the long-term effects of climate. Thus, this GS seeks to protect the environment from the adverse effects that can be inflicted by irrigation schemes.

GUIDANCE STATEMENT 8 – DAMS, THEIR SAFETY AND SECAP

Dams provide a variety of benefits, including water for irrigation, livestock and domestic supplies and fisheries, as well as flood mitigation –and all these activities have had significant impacts on poverty reduction. But too often in the past dams have also created adverse social and environmental impacts. Moreover, dams are normally threatened by various forces that can cause failure and these generally continue to be active over the entire life of the dam. Dams often therefore present a safety hazard, as evidenced by various dam failures and incidents around the world, some with substantial loss of life (IFAD, 2017).

IFAD-assisted projects often include the construction of a new dam, or directly depend on an existing dam, either of which could result in adverse impacts or involve a risk of failure. This *guidance statement* is intended to help stakeholders, including country programme managers and country project management teams, to appreciate:

- (i) the potential for adverse social and environmental impacts and need for safeguards;
- (ii) how the dam planning and development process fits into the IFAD Project Cycle and SECAP;
- (iii) the need for **sound technical advice** in dam design and construction to minimize the risks of catastrophic failure; and
- (iv) the implications for project design in terms of the additional time and finance required.
- (v) Cross-cutting issues such as gender, participation, farmers' organizations, as well as free, prior and informed consent (FPIC), in dam projects.

GUIDANCE STATEMENT 9 – PHYSICAL CULTURAL RESOURCES

For purposes of this guidance statement, physical cultural resources (PCR), also known as cultural heritage or cultural property, may be defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, historical, religious, spiritual or other cultural significance. As such, PCR may be found almost anywhere, in urban or rural settings, above or below ground, or even under water.

PCR may derive their significance from various sources, whether as part of a community's cultural identity and heritage, as assets for economic or social development, or as sources of valuable scientific or historical information. As a result, their cultural significance may be local, provincial, national, or even international in nature (IFAD, 2017).

Although the likelihood that IFAD programmes and projects will involve or affect PCR is small, in such unlikely cases where PCR is found, IFAD will assist borrowers in avoiding, minimizing or mitigating adverse impacts on PCR in the development programmes and projects that it finances. To this end, IFAD will use due diligence in applying its SECAP to ensure that PCR are properly identified and adequately addressed, and that any measures to protect PCR comply with the borrower's national legislation as well as with its obligations under relevant international treaties and agreements (e.g. UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972).

While it is unlikely that IFAD's portfolio of agricultural and rural development programmes/projects will involve or affect PCR, IFAD is committed to identifying and protecting PCR in all its operations. After all, even smallholder agriculture and rural development projects on marginal lands may, depending on location, involve resources of archaeological (e.g. ancient ruins, monuments, prehistoric caves), historical (e.g. original structures, architectural works, historic sites), religious (e.g. churches, mosques, temples, sacred grounds) or cultural (e.g. cemeteries, traditional meeting places) significance. Of particular concern are IFAD programmes/projects: (i) involving significant excavations, demolition, movement of earth, flooding or other environmental changes; and (ii) located in, or in the vicinity of, a PCR site recognized by the borrower. For this reason, IFAD will use its SECAP to ensure that any PCR involved in or potentially affected by an IFAD programme/project are properly identified and adequately protected.

GUIDANCE STATEMENT 10 – RURAL ROADS

IFAD's Strategic Framework 2015-2025 recognizes that weak and imperfect markets continue to be a disincentive to increased agricultural production and productivity by the rural poor. It further recognizes that inadequate rural infrastructure – particularly farm-to-market roads, storage facilities and marketplaces – is a very large part of the problem. IFAD, therefore, seeks to redress the situation by making an investment in productive rural infrastructure, including roads, as one of its key areas of thematic focus. That said, IFAD is unlikely to finance stand-alone rural road projects; it is instead more likely to finance rural roads as part of wider development programmes or simply as components of discrete agricultural development projects. Thus, the guidance statement applies to the planning and financing of projects that include a rural road component. The guidance statement is intended to help stakeholders, including country programme managers and Country Project Management Teams, to appreciate and avoid or mitigate the environmental risks associated with rural road development and to enhance prospects for environmental sustainability (IFAD, 2017).

The inclusion of any rural road in a project would – all other things being equal – result in that project being considered **category B** unless: (i) the road is to be constructed in an ecologically sensitive or hazard-prone areas; or (b) is likely to involve physical resettlement or economic displacement, and in which case, it would be considered a **category A.1**

Positive impacts

The positive impacts of investment in rural roads are well known. Rural roads help to improve transport and communications for the rural poor. Improved mobility enables access to: (i) services (agriculture, education, health, finance); (ii) markets (inputs, agro-processing, wholesale, retail, export); (iii) income-generating opportunities; (iv) social, political and community activities; and (v) technology transfer.

Negative impacts

However, roads can also create significant adverse impacts on the local environment. They can cause significant erosion and sedimentation, loss of wildlife and vegetation, deterioration of water quality and aquatic life, as well as degrade scenic beauty, waste limited funds and take useful land out of production. Negative impacts can be both direct and indirect.

GUIDANCE STATEMENT 11 – DEVELOPMENT OF VALUE CHAINS, MICROENTERPRISES AND SMALL ENTERPRISES

A value chain is a vertical alliance of enterprises that collaborate, to a greater or lesser extent, to bring a product from the initial input supply stage, through the various phases of production, processing and distribution, to the final marketing to consumers

The main goal of IFAD's value chain projects is to integrate target groups (small rural producers) into viable value chains to improve their access to secure markets and to raise their incomes sustainably. These projects finance activities to address constraints to small producers' participation in, and their benefits from, value chains. In general, value chain projects include one or more of three categories of intervention: (i) process/product upgrading; (ii) functional upgrading; and (iii) upgrading of coordination and business models. In practice, these interventions can entail a wide variety of approaches, depending on local challenges and opportunities. The interventions combine value chain development with development of microenterprises and small enterprises (MSEs), and support small producers' organizations and their capacity for collective action (IFAD, 2017).

Micro and Small enterprise (MSE) development consists of a series of support measures to ease constraints posed by existing MSE policies including, trading laws and regulations, capital and administrative requirements, credit services, legal status etc. Additionally, micro and small enterprise development concentrates on intervention points along the value chain. As such, micro and small enterprise development initiatives do not in and of themselves produce negative environmental impact. They can be used to lessen the impact of small enterprises on natural resources. Several issues feature prominently in this GS:

- Environmental issues associated with value chains fall into two categories: green issues, i.e. enhancement or depletion of natural resources including water, soils and biodiversity; and brown issues, i.e. pollution of air, water and land through the waste generated by production processes;
- A key issue is the capacity for value chain segments to drive positive and negative environmental outcomes in other geographies or for other stakeholders through a cascade along the value chain;
- From a social perspective, well-designed value chain projects can improve social inclusion as well as improve average incomes;
- other two key issues to manage in all value chain projects are gender and food security. Different stages and functions of any value chain will be associated with gender-specific knowledge, assets, decision-making powers and responsibilities;
- Household food security and nutrition may be at risk in value chain designs that emphasize monocropping and commercial sales at the cost of local food access or labour demands.
- Inclusion of youth is also a growing issue in value chains;

GUIDANCE STATEMENT 12 – RURAL FINANCE (UNDER REVISION)

Developing inclusive rural financial systems and fostering innovations to increase the access of poor people in rural areas to a wide range of financial services and sound financial institutions is central to IFAD's mandate and key to agricultural and rural livelihoods development. IFAD concentrates on rural microfinance, which refers to the provision of financial services to people with low incomes in rural areas for both on- and off-farm activities. This includes the provision of a wide range of financial services to farming communities, including savings, deposits, money transfers, insurance, and credit. Diverse funding mechanisms such as supplier credit, contract farming, crop and investment loans all provide farmers with external sources of capital during the production cycle (IFAD, 2017).

Rural finance is also used by most farming families to support non-farm income generating activities such as food processing, buying and selling, micro-enterprise, and the migration of family members for seasonal employment in cities. And finally, finance also supports critical life cycle needs such as the education and marriage of children, medical emergencies, housing solutions, and the acquisition of assets for old age. All these have to be done with the environment in mind, so that they do not end up impacting on the environment.

The provision of financial services to poor rural households faces many challenges, including weak infrastructure and low population density located in marginal areas, inherent risks of serving low-income clients living and working in ecologically fragile environments and areas with demarcated natural resources, lack of typical client

collateral, the limited capacity of Financial service providers (FSP), and low levels of client education. The overall financial market may be stunted and distorted from subsidized, targeted lending. Taken together, these challenges increase the transaction costs and risks of serving rural areas and require continual attention and innovation. The contemporary approach to rural finance focuses on building the sustainability of FSPs, thinking beyond the short life cycle of donor-driven projects.

To foster financial inclusion for poor people in rural areas, IFAD's Rural Finance Policy¹ requires compliance with six guiding principles in IFAD-financed rural finance interventions:

- (vi) support access to a variety of financial services;
- (vii) promote a wide range of financial institutions, models and delivery channels;
- (viii) support demand driven and innovative approaches, including providing a full range of financial services to poor families who live in degraded areas, which may, for example, support natural resource management practices and alternative livelihoods that are less harmful to the ecosystem;
- (ix) encourage, in collaboration with private sector partners, market-based approaches that strengthen rural financial markets, avoid distortions in the financial sector and leverage IFAD's resources;
- (x) develop and support long-term strategies focusing on sustainability and poverty outreach; and
- (xi) participate in policy dialogues that promote an enabling environment for rural finance. Any deviation from these principles requires clear justification and approval by management.

GUIDANCE STATEMENT 13 – PHYSICAL AND ECONOMIC RESETTLEMENT

This GS provides guidance to country programme managers (CPMs) and country programme management teams (CPMTs) who are envisaging or dealing with activities or interventions that could imply physical relocation or any change in land use and livelihoods options resulting from an investment supported by IFAD that could negatively impact on some elements of IFAD's target groups and the wider communities where they are found. The GS identifies key principles and measures that the Fund should follow in order to minimize potential risks and avoid any possible negative impacts of physical resettlement or economic displacement (IFAD, 2017).

The GS considers resettlement not only as the physical relocation of people but also as restrictions on or loss of access to means of livelihoods. **Physical displacement** refers to relocation, loss of residential land, or loss of shelter, while **economic displacement** implies the loss of land, assets, access to assets, income sources, or means of livelihoods. Physical and economic resettlement could be either agreed/negotiated or involuntary:

- **Involuntary Resettlement:** This is when affected people or communities do not have the capacity to refuse it – because the free, prior and informed consent (FPIC) principle is not properly implemented and they do not have power of choice – or their rights to refuse it are over-ridden by national law or are simply denied.
- **Agreed/Negotiated Resettlement:** This is when, in the respect of the do-no-harm principle and after having properly informed people and gone through the FPIC process, people potentially involved in the resettlement agree on being relocated and/or selling or relinquishing access to assets, against fair and timely compensations for their losses.

IFAD's core mandate is to support the social and economic empowerment of poor rural women and men. As such, it is opposed to any investment that will have a negative impact on its target groups. Should resettlement or economic displacement be envisaged, the FPIC and the do- no-harm principles – which are two pillars of IFAD's Policy "Improving Access to Land Tenure Security Policy"– will be followed at all times and for all its beneficiaries for "any development intervention that might affect the land access and use rights of communities." Thus, IFAD will make sure that

- the "do-no-harm principle" is adhered to at all times.
- The project affected people's free, prior and informed consent has been solicited through inclusive consultations based on full disclosure of the intent and scope of the activities planned and their implications.

GUIDANCE STATEMENT 14 – COMMUNITY HEALTH

This GS concerns itself with the health and safety risks associated with agriculture, as well as the use of improved technology and personal protective equipment (PPE). Generally, there is a lack of knowledge about

how farmers are affected by their exposures to the variety of health risks that they are confronted with every day. Even the general improvements in health and safety in the workplace and the implementation of the International Labour Organization policies and procedures have not found their way into the agricultural sector. Furthermore, there is little medical surveillance in this sector, resulting in a lack of credible research data and evidence (IFAD, 2017).

This guidance statement aims to identify the main health issues arising from agricultural projects, the causative factors and potential mitigation measures. A health impact resulting from an IFAD-funded project, plan or programme is a measurable change on the health status of an individual, group or population, which may be attributable to the direct or indirect effects of an agricultural development. The impacts may be intended or unintended and may not become apparent for many years after prolonged exposure, or due to long-term latency in the human body. The main health impacts related to agricultural projects are:

- occupational diseases, disorders and injuries;
- waterborne diseases spread to humans through pathogens in water and on irrigated crops;
- vector-borne diseases caused by habitat change;
- non-communicable diseases;
- nutritional disorders; and
- communicable diseases from interaction between people.

There are a number of occupational health issues associated with agriculture, fishing, aquaculture and forestry projects:

- traumatic injury;
- respiratory illnesses;
- noise-induced hearing loss;
- cancer and other disorders from exposure to chemicals;
- zoonoses;
- dermatoses;
- heat and cold stress; and
- musculoskeletal disorders.

Climate change will cause a number of environmental changes which could affect human health in one or more ways. Where rainfall and flooding are predicted to increase (southeast Asia, Asia, the Caribbean, northern South America and West Africa), there will be an increased risk associated with vector-borne diseases, especially those carried by mosquitoes and ticks.

On the other hand, drought and increasing aridity are inimical to most pathogens, while some, such as cysticercosis, bovine TB, rabies, brucellosis and echinococcosis are unlikely to be sensitive to climate change.

Hotter, drier conditions will result in greater amounts of dust and respiratory illnesses, while these conditions will also increase the risks of heat stroke.

APPENDIX 6 PROOF OF STAKEHOLDER CONSULTATION

APP6.1 Consulted Stakeholder

The following are the lists of all the stakeholders who were consulted during the ESMF study.

APP6.1.1 is the list of the stakeholders who were met during the countrywide Field consultation process that were made from the 19th of November 2018, to the 11th of December 2018

APP6.1.2 is the list of the stakeholders who attended the stakeholder's verification workshop that was held in Maputo on the 1st of March 2019.

APP6.1.1 List of Consulted Stakeholders from field visits.

No.	DATE	NAME	ORGANISATION	DESIGNATION	CONTACT No. and E-MAIL
CONSULTING TEAM					
		Sibekile Mtetwa	IFAD	Consultant – Environmental Safeguard Specialist	+ 263
		Henrieta Mutsambi	IFAD	Consultant – Social and Gender Specialist	+263 772 476 756
FARMSE					
		Dixon Ngwende	FARMSE	Director	
		Charles Changalala	RLEEP	Ex - Rleep Officer Mcinji District	+265 884 450 466 charleschangalala@yahoo.com
CENTRAL GOVERNMENT					
		Charles Kalemba	Ministry of Local Government and Rural Development	Permanent Secretary	
		Charles Mkunga	Ministry of Civic Education and Community Development	Community Development Officer	+265 999 797 882
		Freddie Simwaka	Ministry of Gender, Children, Disability and Social Welfare	Women's Empowerment Officer	+265 888 403 590
	03/07/19	Peter Magombo	Ministry of environment EIA Section	Principal Environmental Officer	0999661300 uiquemagombo@gmail.com
	03/07/19	Biswick Mlaviwa	Ministry of environment EIA Section	Principal Environmental Officer	0995666134 bismlaviwa@gmail.com

No.	DATE	NAME	ORGANISATION	DESIGNATION	CONTACT No. and E-MAIL
	03/07/19	Christopher Manda	Ministry of environment EIA Section	Environmental Officer	0999450895
SOUTHERN REGION					
Tyolo District					
	25/06/19	Fabiyano Lucius	Nantchefu Milk Bulking Centre	Chairperson	0884824688
	25/06/19	Thomson Jowei	Nantchefu Milk Bulking Centre	Vice Chairperson	
	25/06/19	Rose Lingomba	Nantchefu Milk Bulking Centre	Secretary	0888711709
	25/06/19	Richman Nyalugwe	Nantchefu Milk Bulking Centre	Vice secretary	
	25/06/19	Andrew Zakariya	Nantchefu Milk Bulking Centre	Treasurer	0884151669
	25/06/19	Margret Joseph	Nantchefu Milk Bulking Centre	Member	
	25/06/19	Samson Chindodo	Nantchefu Milk Bulking Centre	Member	
	25/06/19	Henry Mwamvani	Thoylo District Council	Director of Public Works	0993628890 Hmwamvani2017@gmail.com
	25/06/19	Boniface Kachulu	Thoylo District Council	District Building Supervisor	
	25/06/19	Hastings Phiri	Thoylo District Council	District Roads Supervisor	
CENTRAL REGION					
Kasungu District					
			Kasungu District Office	Environmental Officer	
	26/06/19	Zaina Kapachika	Bowe Farmers Association	Chairperson	0995658318
	26/06/19	Dexter Chipiringu	Bowe Farmers Association	Secretary	0999915340
	26/06/19	Caroline Phiri	Bowe Farmers Association	Member	
	26/06/19	Magret Feleza	Bowe Farmers Association	Member	

No.	DATE	NAME	ORGANISATION	DESIGNATION	CONTACT No. and E-MAIL
Mchinji District					
	01/07/19	Noel Dakamawo	Mchinji District Council	Director of Planning and Development (DPD)	0888356030
	01/07/19	Soko Crispen	Mchinji District Council – Ministry of Environment	Acting District environmental Officer (ADEO)	0999695532
	01/07/19	Duncan Kampini	Mchinji District Council – Ministry of Trade	Trade Officer	
	01/07/19	Nthamyo Mbeye	Mchinji District Council – Ministry of Agriculture	Agricultural Gender Roles and Extension Support services Officer (AGRESSO) + Assistant DADO	
	01/07/19	Starter Magombo	Mchinji District Council – Ministry of Agriculture	Agri-Business Officer	
	01/07/19	Martin Kandiado	Mchinji District Council – Ministry of Agriculture	Assistant Irrigation Engineer	0999312048 Kandiadom61@gmail.com
	01/07/19	Ignacio Chisale	Mwati Farmers Cooperative Society Limited	Chairperson	0994312190
	01/07/19	Anastazia Phiri	Mwati Farmers Cooperative Society Limited	Secretary	0997361244
	01/07/19	Norah Daka Mark	Mwati Farmers Cooperative Society Limited	Member	0996127543
	01/07/19	Eston Chayamba	Mwati Farmers Cooperative Society Limited	Member	0997004260
	01/07/19	Macdonald Christopher	Tithandizane Irrigation Scheme – Seed Store	Chairperson	0994081347
	01/07/19	Paul Kanthiti	Tithandizane Irrigation Scheme – Seed Store	Member	
	01/07/19	Maxwell Phiri	Tithandizane Irrigation Scheme – Seed Store	O & M Head	0993432858
	02/07019	Chief Mlonyeni	Mlonyeni Village T.A. Mlonyeni	Snr Chief	0998505388
	02/07019	Bruno Sosolo	Mlonyeni Village T.A. Mlonyeni	Chief's Clerk	0991384411
	02/07019	Petronella Malunga	Angoni Agro-Dealer Ndawembe Village T.A. Mlonyeni	Agro - Dealer	0993290072
	02/07019	James Clement	Mkanda EPA	Agriculture Extension	0888583045 0881804327

No.	DATE	NAME	ORGANISATION	DESIGNATION	CONTACT No. and E-MAIL
		Chisoni		Development Coordinator (AEDC)	0999104705
NORTHERN REGION					
Nkata Bay District					
		Never Mulungu	Nkata Bay District Office	Environmental District Officer	0881248237 0996752802 nevervmulungu@gmail.com
	27/06/19	Burnings Mwenitete	Luweya Bee Keepers Association	Chairperson	
	27/06/19	Joseph Njoromore	Luweya Bee Keepers Association	Secretary	
	27/06/19		Kabuduli Honey Cooperative		
	27/06/19		Kabuduli Honey Cooperative		
	27/06/19		Kabuduli Honey Cooperative		
Karonga District					
	28/06/19	Michael Mapundi	Karonga Distict Council	District Animal Health and Livestock development Officer	0999768518
	28/06/19	John Nyona	Karonga Distict Council	District Animal Health and Livestock development Officer	0992838485
	28/06/19	Raphael Mkisi	Karonga Distict Council	District agriculture development Officer (DADO)	0888110802 Mkisi.rafael@gmail.com Mkisi.rafael@outlook.com
	28/06/19	Isaac Mkandawire	Karonga Distict Council	Director of Planning Development (DPD)	
	28/06/19	Khumbo Mbeye	Karonga Distict Council	Environmental District Officer (EDO)	0888685573 khumbombeye@yahoo.co.uk
	28/06/19	Gift Kaira	Kasoba Cattle Market Centre	Assistant Veterinary Officer (AVO)	0888930301
	28/06/19	Arston Mwafuirwa	Kasoba Cattle Committee	Chairperson	0993822989

No.	DATE	NAME	ORGANISATION	DESIGNATION	CONTACT No. and E-MAIL
	28/06/19	Ester Mwafulirwa	Kamwenya Village - Tilora Cattle Dip	Village Head	
	28/06/19	Gibson Mulura	Tilora Cattle Dip	Chairperson	099907720
	28/06/19	Speke Mkandawire		Vice Chairperson	0993675259
	28/06/19	Eliness Nyakhusa			
	28/06/19	Tasowana Nyilongo			0884518066
	28/06/19	Ophrese Mzembe			
	28/06/19	Lester Mwahghali		AHSA	

APP6.1.2 List of Consulted Stakeholders from public consultation workshop.

**MINISTRY OF LOCAL GOVERNMENT AND RURAL DEVELOPMENT
(MLGRD)**

**TRANSFORMING AGRICULTURE THROUGH DIVERSIFICATION
AND ENTREPRENEURSHIP**

**(TRADE)
ENVIRONMENTAL AND SOCIAL SAFEGUARDS**

STAKEHOLDER CONSULTATION WORKSHOP 29TH JULY 2019

LIST OF PARTICIPANTS

No.	NAME	POSITION	ORGANISATION	CONTACT NUMBER	EMAIL
1.	Allan Chitete	Director of Public Works	Rumphi District Council	0999 250 812	allanchitete@gamil.com
2.	Ignasio Chisale	Chairperson	Mwati Coperative	0994 312 190	
3.	John chidumoyo	Senior Chief		0998 505 398	
4.	Raphael Nkisi	District Agriculture officer	Karonga District Council	0888110 802	
5.	Alfrey Kamenya	CPO	Farmse	0888 553 384	akamenya@farmse.org
6.	Doreen Phiri	Trade Officer	Kasungu	0999 610 962	phirdoreen@gmail.com
7.	Christopher Manda	Environmental Officer	Department of Environment	0999 450 895	Mandachristopher@gmail.com
8.	Zaina Kapachika	Chairperson	Bowe Cooperative	0995 658 318	
9.	Yamikani Mzumara	IMO	FARMSE	0992 006 630	mzumaray@farmse.org
10.	Golie Nyirenda	KM&KO	FARMSE	0888 877 250	gnyirenda@farmse.org
11.	Rodgers Mbekeani	RFMS	FARMSE	0999 950 100	rmbekani@farmse.org
12.	Dick Nkasauka	Trade Offcer	Lilongwe	0999 475 215	Dicknkasauka@gmail.com

13.	Elias Mkandawire	DPW	Dedza	0888 387 125	eliasmkandawire@
14.	Dixon Ngwende	pc	FARMSE	0888 216 000	dngwende@farmse.org
15.	Manuel Manganya	M&E	FARMSE	0888 892 228	mmanganya@farmse.org
16.	Jossen Tembo	DPD	Thyolo	0888 738 395	tembojossen@yahoo.com
17.	Robson Tapani	STA	Thyolo	0880 520 122	
18.	Fabiano Lusiasi	Chairperson	Nantchefu		
19.	Linda Mphande	DADO	Blantyre	0888 651 409	nyagondwe@yahoo.com
20.	Burnings Menitete	Chairperson	Luweya Bee keepers		
21.	Charles Changalala		Mchinji	0884 450 466	charleschangalala@yahoo.com
22.	Tamanya Harawa	DPD	Chitipa	0888 354 776	tamanyaharawa@yahoo.co.uk
23.	Arston Mwafulirwa	Chairperson	Kasoba Cattle committe	0993 822 989	
24.	Noel Dakamau	DPD	Mchinji	0888 356 070	noeldakamau@yahoo.com
25.	Japhet Zingani	Public Works	Ntchisi	0999 669 457	jzingani@gmail.com
26.	Rhoda Chisuwo	AA	FARMSE	0999 890 725	rchisuwo@farmse.org

APP 6.2 PROOF OF PUBLIC CONSULTATION

Samples of the response to the administered questionnaire and records of direct interviews have been included as proof of public consultation. The rest of the records of the public consultation process are compiled as Volume 3 of this report.

APP 6.2.1 Programme Inception Meeting with Mr. Dixon Ngwende

(i) Minutes of meeting

Date: 20 June 2019 Lilongwe

No.	NAME	ORGANISATION	DESIGNATION	CONTACT No. AND E-MAIL ADDRESS
1.	Mr. Dixon Ngwende	FARMSE	Programme Coordinator	+265

Discussion Notes

- This was the first meeting held between the Consultants and FARMSE Coordinator. The objectives of the meeting was to get to know each other and agree on the programme of action for the Consultants.
- The Coordinator explained that he had received short notice but he was going to make sure that the consultants' visits is well organised.
- He explained also that the political situation was currently volatile with mass demonstrations against the recent presidential election outcome.
- The Consultants outlines the objectives of the visit and the methodology including the in situations, preferred places/commodity area sites to be visited and interviewed.

Logistics

- It was agreed that FARMSE was going to provide a vehicle and a driver for the Consultants to move around.
- In addition, FARMSE would also get someone who was familiar with the areas to be visited to take the consultants around.

APP 6.2.2 Meeting Ministry of Local Government and Rural Development

(i) Minutes of meeting

Date: 20 June 2019

No.	NAME	ORGANISATION	DESIGNATION	CONTACT No. AMD E-MAIL ADDRESS
1.	Mr. Charles Kalembe	Ministry of Local Government and Rural Development	Permanent Secretary (Chairperson of TRADE Steering Committee)	265-1 789590 265-888 838 901 ckalembe@hotmail.com

Introduction

In his overview statement, the Secretary for the MoLGRD highlighted that TRADE is a successor programme of RLEEP project which was also developed from the Malawi Value Chain project.

- RLEEP was a value chain programme focusing on Irish potato, milk, meat, legumes and honey value chains. The RLEEP value chains were a major success e.g. the Bonsmara zebu breed from South Africa in the northern region, Irish potato in Dedza district where people are entrepreneurs today instead of just selling by the roadside. For legumes value chain, the warehouse and receipting system was a success⁷ and safeguarded farmers from selling for paltry prices. There was also an element of group savings schemes. The focus on all value chains was not only on production but development of strong links with ready buyers.
- TRADE therefore is premised upon the successes of RLEEP which saw positive transformation of life and reduction of poverty through progressive development of beneficiaries. The project will facilitate construction/rehabilitation of access roads, warehouses, milk bulking centres, irrigation schemes that are more sustainable than rain-fed agriculture. TRADE will be a countrywide project except where FARMSE is already doing the same and also where the project.
- The Local Government therefore decided that a lot has been done in terms of social infrastructure provision but there is need to move into local economic development from individual level to national level which fits into the national economic framework.
- TRADE will therefore pick up from where RLEEP ended and deepen the systems that will contribute towards eradication of poverty.
- TRADE just like preceding programmes such as RLEEP, SAPP, PRIDE have the same people in the Steering and Technical committees and extension services although housed differently. The housing of RLEEP in Local Government was because its design was district based and had to respond and support districts development plans that had already been developed and also looking at the potential in each district in terms of suitable Value Chain e.g. there are a lot of forests in Nkhata Bay so honey was propagated there and the meat value chain was mostly in the North because there are a lot of cattle there and Irish potato concentrated in Dedza and Nctheu districts. Coordination was done in the ministry but actual implementation was at district level.

Environmental Impacts

⁷ A system whereby farmers would deliver their produce to the warehouse and get a receipt which they can use to get an advance/loan from the bank whilst waiting for a good price for their produce

- Destruction of the environment was quite noticeable but was mainly driven by poverty levels as a result of failure of the agricultural systems leaving people with no choice but to cut down trees for charcoal or for sale etc.
- Wrong farming methods also contributed to environmental degradation. Wrong farming methods require large pieces of land to produce very little and the more the environment is destroyed. Good agricultural methods (sustainable farming methods) will protect both the environment in terms of vegetation and land use whilst producing more. For example for cattle production it is encouraged to apply khola feeding as compared to animal being allowed to graze everywhere.

Social Impacts

- Creation of social order in terms of stability. When people have something to do with their lives, they become less destructive.
- The project did not balance up. The more you produce and the little you market your produce brings dissatisfaction. Project mentality (poor conceptualisation at design stage) at times is a negation of sustainable development. Projectising activities with dos and don'ts and with set timeframes and ending when people are just starting to pick up cause a lot of frustration.
- There is need to have a system that is well coordinated and with adequate capacity for local government to continue after the official end date of the project. There is need to build in mechanisms that acknowledge the fact that life is not an experiment and neither is it a project. Sustainability and continuity are key in order to avoid frustration of the people who would have otherwise picked up. Only those who would have developed their own vision will be able to progress.
- Marketing under the RLEEP was an afterthought and also caused some frustrations after people had produced at large scale but failed to move their produce. This area needs to be intensified under TRADE. There was also market misinformation e.g. for legumes, it was believed that there was a lot of market in India and Dubai etc. but never materialised. For meat value chain, there was only one private entity (Nyama World) which is not sustainable. There is need to broaden the horizon for meat producers to avoid price monopoly and increase farmers bargaining power for fair price.
- To improve the road network and link farmers to the markets, just as in RLEEP, the new project will construct/rehabilitate trunk roads and make them all weather passable.
- **In terms of women's involvement**, there are slight differences between regions or value chain but generally women participate more in agriculture than men. For example, the meat value chain is household based and controlled by men whereas the other value chains are based on groups which are rather dominated by women. Men somehow are not good at being in groups and in savings and lending schemes that have been formed, men proved not to be eager participants. The other reason however is that most men are away most of the time working in non-farm jobs elsewhere.
- The Central region is matrilineal society but in practice, the women have to seek consent of male relatives in decision making. In the Northern region, Rumphi, Chitipa and Karonga for example, cattle may be registered under both partners but in practice, it is the men who makes decisions. In Ntcheu the Ngoni's are patrilineal on the outside but very matrilineal in terms of decision making (e.g. men cannot sell cattle without the approval of the wife including the pricing).
- In terms of gender programming for TRADE efforts have been made to make sure that women issues are mainstreamed in all the components of the project.
- **Youths** – Under RLEEP, there was no deliberate engagement of youths. There is for a deliberate move to incorporate the youths but this need to start from the education system to instil in the youths the importance of agriculture and that “soil is not dirty”.
- It may also be beneficial to pick the youths at a higher level of the value chain where it's more lucrative whilst trying to lure them to actual farming.
- The good thing about the value chain programme is that everyone has a niche.

- **Ownership of land** – In the North, women do not own land and even in the Central where it is a matrilineal society, the land belongs to uncles and brothers. For youths it is worse and they have to work with their fathers and uncles.
- RLEEP was using communal land or personal land but strictly under customary laws. There was no need of legally owning land. One could lend to a group which would become security for that land.
- Indigenous and issues of disability – No community is disadvantaged because of tribe, location or otherwise.
- The aim is to integrate everyone even the disabled, a concept that is being reinforced at schools.
- **Operation and Maintenance** – There is a successful mechanism whereby facilities are managed professionally using a sustainable business model. For water, Water Users Associations are in place. For Milk Bulking Centres, cooperatives are responsible and they employ people to manage. The facilities are regarded as business entities and not social facilities and by the time the facilities will be handed over, they responsible people would have been trained adequately to manage the facilities.

Signed

Date

Interviewer:

Date

APP 6.2.3 Meeting at Nantchefu Milk Bulking Centre



Figure Milk Bulking Centre

Minutes Of Meeting

Date: 25 June 2019

District: Tyolo District

No.	NAME	ORGANISATION	DESIGNATION	CONTACT No. AND E-MAIL ADDRESS
1.	Mr Fabiyano Lucious	Natchefu Milk Bulking Centre	Chairman	+
2	Mrs Rose Lingomba		Secretary	
3	Mr. Richman Nyalugwe		Vice Secretary	+888 711 709
4	Mr. Thomson Jowel			
5	Mr. Andrew Zachariah			
6	Mrs Magret Josephy			
7	Mr. Samson Chindodo			

Introduction

- The cooperative started in 1997 and to date there are 291 members with 117 females and 60% youths. The group started with 27 farmers but has been growing even amidst competition to other MBCs in the area.
- Each farmer has their own dairy cow which they milk and bring the milk to the Bulking Centre
- The cows are bred in kholas – no open grazing. The cows are given maize bran and grass that is cut from along rivers and plantations. They are also given supplements and as required.
- Land is very limited to practice open grazing
- RLEEP built the MBC and installed a solar system as back up electricity to ESKOM
- The project also provided technical assistance for artificial insemination, VSLs and training
- The other equipment was provided by Shire Highlands Milk Producers Association (SHMPA)
- Farmers buy their own cows but those who cannot are considered for the facility provided by SHMPA whereby they are given a cow and after breeding, they pass the female calf to the next farmer.
- Farmers who buy their own cows are free to sell it where they want but those under contract are obliged to bring it to the MBC as stipulated.
- The beneficiaries for the SHMPA facility are identified within the community and will be interviewed by the VET to ascertain genuine need and eligibility before going for training on dairy farming. SHMPA and Heifer International offer the training and every dairy farmer undergoes the training.
- SHMPA benefits by selling minerals, maize bran, dip and other drugs.
- At the Bulking centre the milk is tested to make sure it is fresh and that it is not mixed with water. The milk is pasteurised at the centre
- The farmers are motivated because;
 - o There is unity on the cooperative
 - o They have a uniform and fare price
 - o They get a lump sum at the end of the month which enable them to do something meaningful than before
 - o They realise benefits that they would not if they were working individually
- The farmers largely depend on dairy farming as their main income generating activity and most of them have manage to pay school fees and build houses among other things.
- The farmers require capacity building in business management to be able to process the milk on their own and realise more value. They also require financial management assistance
- There is a borehole at the MBC of which every farmer contributes 200K per month which is deducted from the monthly payment

- Cooperative have put together bricks and are now requesting for assistance for cement for a security wall.
- The farmers recommend that the new project should emphasise on VSLs but boost the group with a substantial loan at the beginning.

Environmental Impacts

- Farmers cut down trees for Khola fencing and grass for feeding resulting in deforestation and soil erosion
- Use of chemicals and disposal of empty bottles a risk to community health. Burning the containers produce toxic fume. Burying them much preferred abut ultimately may cause other challenges
- They advise their farmers to grow blue gums for khola fencing
- They grow elephant grass to use as supplementary feeding during the dry season
- They also grow fodder (grilicidia) for cattle feeding
- Manure form the kholas is used in the vegetable gardens

Social Impacts

- There have been cases of unhygienic milk and have had to turn back the concerned farmers
- The farmers are given training on health and hygiene and are refreshed 3 times a year
- Women because of inferiority complex are afraid to go into top leadership levels
- The group has managed to grow because of;
 - o Low reject rate
 - o Proper handling of farmers
 - o Professional handling of grievances
 - o Democracy – elections every 3 years
-
- constitution not in place as it got lost during the development process

Response To Questionnaire

Transforming Agriculture Through Diversification and Entrepreneurship (TRADE)

ESMF - QUESTIONNAIRE

NAME Fabiyano Lucius I.D. NUMBER _____
 ORGANISATION Nantchefu Milk Bulking Centre
 PHYSICAL ADDRESS Tyoto District - Chapendo Trading
 PHONE NUMBER _____ E-MAIL ADDRESS _____

The Government of Malawi and IFAD are currently designing a programme called Transforming Agriculture Through Diversification and Entrepreneurship (TRADE) to improve sustainable livelihoods of rural people in Malawi. The development objective is "increased value chain commercialisation and resilience of rural poor and smallholder producers". This will be achieved through targeted support to smallholder farmers to increase productivity through climate smart interventions; benefit from commodity markets; improved access to rural financial services, market and business development services; and enhanced partnerships with the private sector. TRADE will also support non-farmer value chain actors, such as commodity vendors and other rural entrepreneurs, focusing on youths and women to develop and sustain their agribusiness enterprise opportunities and also pay attention to achieving nutrition outcomes. TRADE is initially expected to cover 11 districts and 7 commodity value chains (groundnuts, soyabean, sunflower, Irish potato, dairy, beef and honey) What are your views about this proposed Developmental Project in terms of environmental and social positive and negative impacts?

ENVIRONMENTAL IMPACTS

- They advise farmers to grow blue gum for building kholas
- they grow Elephant grass to use as supplementary feeding during dry season.
- Manure from kholas is used in gardens.
- Farmers grow fodder (gritacidia) for cattle feeding
- Cutting down of trees for khola, cattle dung of grass (e.g.)
- Use of chemicals & disposal of empty containers
 ↳ burnt/buried underground
 ↳ farms

SOCIAL IMPACTS

Hygiene - Have had cases of unhygienic milk & returned it. Advice have been given i.e milk is pasteurised at the Centre. Training include Health & Hygiene & have webrefreshers 3 times a year. GTP has managed to grow bags @ low milk yields @ handle farmers properly @ Professional handling of grievances @ Democracy - elections - 3 years @ In the process of developing a constitution (at least). Inferiority Complex prevents women from top positions

OTHER COMMENTS

Signed. Fabiyano Luciusi Feb Date 25/06/2019
 Interviewer [Signature] Date 25/06/19

App 6.2.4 Meeting Farmer /Aggregator – Chimbiya Trading Centre



Figure Chimbiya Trading Centre

Minutes Of Meeting

Date: 26 June 2019

No.	NAME	ORGANISATION	DESIGNATION	CONTACT No. AND E-MAIL ADDRESS
1.	Ms Telesa Edinala	Chimbiya Trading Centre	Farmer/Aggregator	+265 996 962 523

Introduction

- The farmer specialises in Irish potato and does it as a business

- She provides own inputs (fertilisers, seed etc)
- There are no extension services in the area and would want to get assistance in order to increase production
- They get complaints at times because of poor crop both in terms of quality and size of the potatoes
- The longer it takes to sell the crop, the more the crop deteriorates in terms of quality
- Potato from farmland has better shelf life than from Dambo (resistance capacity)
- The price is determined by season or weather
- Once her crop is finished, she goes around the community farms and buy for resale at the trading centre
- She makes at least 40% profit margin

App 6.2.5 Meeting Bowe Warehouse Association



Figure Bowe Warehouse including Value addition

Minutes Of Meeting

Date: 26 June 2019

District: Kasungu District

No.	NAME	ORGANISATION	DESIGNATION	CONTACT No. AND E-MAIL ADDRESS
1.	Mrs. Zana Kapachika		Chairlady	+265 995 658 318
2				
3				
4				
5				
6				
7				

Introduction

- The Cooperative started in 2005. There are 374 beneficiaries and 329 members. Total number of women is 318, 56 men and 123 youths.
- There is a 15 member executive and women occupy chairperson and treasurer positions. Paid workers are 14 and are all youths
- The cooperative was specifically chosen by the project because they were organised and active even when the external environmental was against them
- The Cooperative makes use of skills within their membership e.g. accounts, marketing etc
- The cooperative through a bank loan facility provides farm inputs to farmers as a loan (fertiliser, seed and inoculants among others). The farmers pay back the loan through their farm produce according to the agreement they would have signed.
- Some farmers bring their produce to the warehouse for safe keeping whilst waiting for a good price from buyers but some come to sell directly and get paid by the warehouse
- The VSL scheme also accommodate outsiders. Farmers can borrow as long as they go through the vetting process and qualify for a loan.
- The cooperative also supports education opportunities for children from primary to tertiary level
- The overall vision for the cooperative is to transform the warehouse into a factory and create employment for youths.

Environmental Impacts

- Farmers were taught to plant trees and the whole area surrounding the cooperative premises which used to be bare has been transformed into a thick forest
- The members get education on sustainable use of fertilisers and organic manure
- There are no health and hygiene as well as protective clothing in the processing plant
- Meeting the required standards according to Malawi Bureau of Standards (MBS) in terms of health and hygiene, drainage, safety precautions and quality of the products still proving to be difficult

Social Impacts

- The cooperative accommodate farmers socially through various activities (sports, guidance and counselling especially for women and youths etc. to motivate their participation)
- Conflict resolution is done according to the Constitution
- Motivation mostly comes from the Chairperson who promotes social cohesion and professionalism
- Families that are part of the cooperative have transformed economically with some building houses with corrugated iron roofs, bicycles, motor cycles and various livestock.
- There is a history of mismanagement of funds and favouritism and members do not trust men as chairpersons now. The current chair tries to embrace everyone as an equal member of the cooperative.

- Most of the farmers depend on rain-fed agriculture and there is no plan yet in place to shield farmer during difficult year. VSLs also require the farmers to be investing the money into a business not just to use it all.
- The farmers feel that the interest being charged by the bank and other financial providers is too high and together with cooperative running fees, it becomes too much on an individual.
- A huge starter pack will go on ay to help the farmers
- The cooperative is at a high risk of input loan defaulters every year and the cooperative has to cover the gap through other income generating projects such as piggery, fowls, goats and cooking oil machine that processes oil for sale.
- The women depend on farming which is only for a short season and will have to wait until the next season. There is need to have stopgap measures to keep the farmers busy and cover the financial gap e.g. soap making, goat rearing, tying and drying of cloths and peanut butter processing.

Response To Questionnaire

Transforming Agriculture Through Diversification and Entrepreneurship (TRADE)

26-06-19

ESMF – QUESTIONNAIRE

NAME Zainu Kapachika (F) I.D. NUMBER _____
 ORGANISATION Bowe Cooperative
 PHYSICAL ADDRESS Kasungu District
 PHONE NUMBER 0995658318 E-MAIL ADDRESS _____

The Government of Malawi and IFAD are currently designing a programme called Transforming Agriculture Through Diversification and Entrepreneurship (TRADE) to improve sustainable livelihoods of rural people in Malawi. The development objective is "Increased value chain commercialisation and resilience of rural poor and smallholder producers". This will be achieved through targeted support to smallholder farmers to increase productivity through climate smart interventions, benefit from commodity markets, improved access to rural financial services, market and business development services; and enhanced partnerships with the private sector. TRADE will also support non-farmer value chain actors, such as commodity vendors and other rural entrepreneurs, focusing on youths and women to develop and sustain their agribusiness enterprise opportunities and also pay attention to achieving nutrition outcomes. TRADE is initially expected to cover 11 districts and 7 commodity value chains (groundnuts, soyabean, sunflower, Irish potato, dairy, beef and honey) What are your views about this proposed Developmental Project in terms of environmental and social positive and negative impacts?

ENVIRONMENTAL IMPACTS

- Cooperative very conscious of env degradation. Embarked on tree planting at its core as a whole maintains now.
 - Also work in community to plant trees & women were walking very far to get water to water plants. Encouraged sustainable use of fertilizers & organic manure. Health & hygiene & protective clothing in the process plant. Malawi Bureau of Standards has prescribed some standards

Concrete changey environment hygiene protective clothing

SOCIAL IMPACTS

- Social cohesion, Motivational comes from the resolve chairperson. Some have resigned but more have joined a cooperative because of the success. Attempt to do conflict resolution very air constitution. Families have transfer mechanistically building houses in iron sheets, motor cycle, vest 2K.

OTHER COMMENTS

Signed. [Signature] Date 26/06/2019

Interviewer [Signature] Date _____

703 members, 85% women, 100% literates

App 6.2.6 Meeting Luweya Bee Keepers Association



Figure Luweya Bee Keepers

Minutes Of Meeting

Date: 27 June 2019

District: Nkata Bay

No.	NAME	ORGANISATION	DESIGNATION	CONTACT No. AND E-MAIL ADDRESS
1.	Mr Burnings Mwenitete		Chairman	+
2	Mr Joseph Njoromole		Secretary	

Introduction

- There are 298 active members but less women in the club
- The Association benefitted the Bee Collection Center from RLEEP and the farmers were also trained on business skills and how to treat bee keeping as a business.
- Farmers bring their honey to a central place where they collectively sell and bargain for a fair price
- They employ a clerk during peak season
- When they collect enough honey, they call the buyers to come and collect.
- The cooperative raise funds through honey submission fees, membership fees, grants and loans from banks.

Environmental Impacts

- Farmers are encouraged to preserve places set aside for bee keeping. Keeping one 'appear' where they keep bees. Tree cutting is discouraged
- There is need for research and development on possible plants that make or alternate to produce nectar all year round. During rainy season there is no nectar.
- Farmers have been found wanting on the Health and hygiene front. Farmers are required to do baseline processing at home(cold dripping) but at the collection centre, the process may be repeated if necessary
- Bee wax (honey combs) which is the by-product from cold dripping is sold to processing companies as honey combs. If processed locally, the manure is used in fields.
- Bee Propolis – There is need for research and development to see how it can be utilised. A buyer if identified will add a lot of value to the farmers.

Social Impacts

- Interest on bank loans is too high for the farmers to be able to develop
- Buyers do not usually pay cash upon collection of honey which is a problem for farmer
- The option is to have revolving fund as a cooperation but that requires a loan with favourable condition or a grant. This will enable the cooperative to pay farmers as they bring their honey.
- VSL schemes are there but the model (or rather the conceptualisation) is not meeting the gap. The farmers do not have businesses to invest the borrowed money which needs to be returned with interest so they shun the facility.
- Bee Keeping is a seasonal activity ad there are no plants with nectar between December and February the next year. There is therefor need for a stop gap measure to cushion farmers
- There is need for training in alternative livelihoods.
- The Association has been sharing information on a radio station to help and motivate other farmers
- A special wing for women has been created to make sure that their concerns are taken care of
- The Association has been sharing information on radio to help and motivate other farmers
- There are less women because when the activity was introduced, it targeted mostly men. Bee keeping is also dangerous
- Inadequate protective clothing. Farmers find it too expensive.
- The feeling is that if they could get more money they can venture into processing and will be able to pay farmers, service loans and have some saving in the bank.

Response To Questionnaire

Transforming Agriculture Through Diversification and Entrepreneurship (TRADE)

ESMF – QUESTIONNAIRE

NAME Mr. Burnings Mwendete ID NUMBER _____
 ORGANISATION Luwera Bee Keepers Association
 PHYSICAL ADDRESS Nkater Bay District
 PHONE NUMBER _____ E-MAIL ADDRESS _____

The Government of Malawi and IFAD are currently designing a programme called Transforming Agriculture Through Diversification and Entrepreneurship (TRADE) to improve sustainable livelihoods of rural people in Malawi. The development objective is "increased value chain commercialisation and resilience of rural poor and smallholder producers". This will be achieved through targeted support to smallholder farmers to increase productivity through climate smart interventions; benefit from commodity markets; improved access to rural financial services; market and business development services; and enhanced partnerships with the private sector. TRADE will also support non-farmer value chain actors, such as commodity vendors and other rural entrepreneurs, focusing on youths and women to develop and sustain their agribusiness enterprise opportunities and also pay attention to achieving nutrition outcomes. TRADE is initially expected to cover 11 districts and 7 commodity value chains (groundnuts, soyabean, sunflower, Irish potato, dairy, beef and honey) What are your views about this proposed Developmental Project in terms of environmental and social positive and negative impacts?

ENVIRONMENTAL IMPACTS

Thinking of a revolving fund within the cooperative. Need a credit guarantee for that. They pay + savings in advance as they form the society.

- Bee keeping is a seasonal activity.
- Challenge is that there are no plants in the nectar between Dec + Feb. There is need for a stop gap measure to cushion farmers. Farmers encouraged to reserve places for bee keeping.

SOCIAL IMPACTS

Buyers do not pay cash immediately which becomes a problem with farmers. Submission fee, membership fee, Grant + loan are sources of association. Interest rate can be high. VSL exist but the model is not really meeting the gap. People do not have any business to invest the borrowed money in needs to be returned to interest. Thinking of making Cassava Flour as an income generation project in between.

OTHER COMMENTS

Signed: [Signature] Date: _____
 Interviewer: [Signature] Date: 27/06/19

Fee

App 6.2.7 Meeting Senior Chief Mulonyeni – Mchinji District



Figure Meeting Senior Chief Mulonyeni

Minutes Of Meeting

Date: 02 July 2019

District: Mchinji District

No.	NAME	ORGANISATION	DESIGNATION	CONTACT No. AND E-MAIL ADDRESS
1.	Snr. Chief Mlonyeni	Mlonyeni Authority	Traditional Senior Chief	+265 998 505 388
2.	Mr Bruno Sosoro	Mlonyeni Authority	Traditional Chief's Clerk	+

Introduction

Environmental Impacts

- The community is mandated to conserve the environment through growing of indigenous trees which conserve more water than exotic trees.
- In home gardens, the farmers are encouraged to use organic manure although they also add artificial fertiliser on their crops

Social Impacts

- There is need for a good road network to help farmers transport produce to the market
- The road that links farmers to a very busy trading centre (Lenswe) is not usable as the bridge was washed away.
- There is need to expand and include groundnuts, maize and dairy animals although the crop that is predominantly grown is potato
- There is need to enhance capacity building to help the small scale farmers in terms of learning visits, agricultural practices and training on management of different value chains.
- RLEEP did quite a lot and a follow up project is most welcome but should help them in getting a market for their crops
- Good quality seed for potato and groundnuts is inadequate and efforts should be made to have it nearby as well as a seed house
- In selection of beneficiaries, the Chief sets up a committee that identifies household based on existing capacities. These are then trained by the Agric Ext Officer.
- Ultra poor Households are not discriminated upon but they look at certain qualities like hard working etc
- Youths are incorporate in all project for their skills and ability to think faster
- Youth and women are encouraged to venture into agriculture because they work hard
- Women under the Ngoni do not own land unlike the Chewas. Rather they are given pieces of land when they get married
- Value addition will be good if they can get assistance with the requisite infrastructure. They would want to process maize into flour that can be exported.

Response To Questionnaire

Transforming Agriculture Through Diversification and Entrepreneurship (TRADE)

ESMF - QUESTIONNAIRE

Sr. NAME: Chief Mlonjeni I.D. NUMBER: _____
 ORGANISATION: Mchinji District - Mlonjeni Village
 PHYSICAL ADDRESS: Mchinji
 PHONE NUMBER: 0998505388 E-MAIL ADDRESS: _____

The Government of Malawi and IFAD are currently designing a programme called Transforming Agriculture Through Diversification and Entrepreneurship (TRADE) to improve sustainable livelihoods of rural people in Malawi. The development objective is "Increased value chain commercialisation and resilience of rural poor and smallholder producers". This will be achieved through targeted support to smallholder farmers to increase productivity through climate smart interventions; benefit from commodity markets, improved access to rural financial services, market and business development services; and enhanced partnerships with the private sector. TRADE will also support non-farmer value chain actors, such as commodity vendors and other rural entrepreneurs, focusing on youths and women to develop and sustain their agribusiness enterprise opportunities and also pay attention to achieving nutrition outcomes. TRADE is initially expected to cover 11 districts and 7 commodity value chains (groundnuts, soyabean, sunflower, Irish potato, dairy, beef and honey). What are your views about this proposed Developmental Project in terms of environmental and social positive and negative impacts?

ENVIRONMENTAL IMPACTS There is need for good road network to help farmers transport produce to the mkt. The road at links farmers to a very busy road (which is now) bridge was washed away. roads need to be expanded to include groundnuts & maize to the coast which will help grow potatoes, dairy animals etc. they make sure people conserve trees - natural trees a wise idea. water from exotic. Encourage use of organic manure in gardens as much as they try to use organic. they also add fertilizer on crops but want project to help them! - there is need to enhance capacity building on beneficiaries & leaders eg: learning, visits, agric practices, help on mgt of value chains.

SOCIAL IMPACTS RREEP did quite a lot & a follow up project is most welcome. In a housing projects beneficiaries a committee is set by the chief which exists as a partner. They invite the Agric officer to train the selected people. With peer one considered but at a time of 2 quantities of hard work. they include youths for their skills & ability to think faster. Youth & women are encouraged to venture into agric because they work hard. Women under the Dep. M. do not own land but change is offered: women are given pieces of land when they get married. The new program should help own land which is a ticket. Quality seed for potato & groundnuts is in adequacy. Always advise farmers to take air farming as a business & to go beyond the initial starter pack provided by project - there is need for seed house. Farmers will want infrastructure to benefit value to their products & maize into flour. there can be expected.

OTHER COMMENTS value to their products & maize into flour. there can be expected.

Signed: SENIOR CHIEF MLONJENI Date: 2/1/19

Interviewer: [Signature] Date: 02-07-19

over 300 villages

APPENDIX 7 GUIDELINES FOR THE DEVELOPMENT OF SUB-PROJECT ESMPs

APP 7.1 ESMP Development

When a sub-project includes distinct mitigation measures (physical works or management activities), an Environmental and Social Management Plan (ESMP) needs to be included with the sub-project application. An example ESMP is presented in Chapter 8 of this ESMF.

ESMP Contents:

An ESMP usually includes the following components:

- Description of adverse effects: The anticipated effects are identified and summarized.
- Description of mitigation measures: Each measure is described with reference to the effect(s) it is intended to deal with. As needed, detailed plans, designs, equipment descriptions, and operating procedures are described.
- Description of monitoring program: Monitoring provides information on the occurrence of environmental effects. It helps identify how well mitigation measures are working, and where better mitigation may be needed. The monitoring program should identify what information will be collected, how, where and how often. It should also indicate at what level of effect there will be a need for further mitigation. How environmental effects are monitored is discussed below.
- Responsibilities: The people, groups, or organizations that will carry out the mitigation and monitoring activities are defined, as well as to whom they report and are responsible. There may be a need to train people to carry out these responsibilities, and to provide them with equipment and supplies.
- Implementation schedule: The timing, frequency and duration of mitigation measures and monitoring are specified in an implementation schedule, and linked to the overall sub-project schedule.
- Cost estimates and sources of funds: These are specified for the initial sub-project investment and for the mitigation and monitoring activities as a sub-project is implemented. Funds to implement the EMP may come from the sub-project grant, from the community, or both. Government agencies and NGOs may be able to assist with monitoring.

Monitoring Methods:

Methods for monitoring the implementation of mitigation measures or environmental effects should be as simple as possible, consistent with collecting useful information (see example below) and that community members can apply themselves. For example, they could just be regular observations of sub-project activities or sites during construction and then use. Are fences and gates being maintained and properly used around a new water point?; does a stream look muddier than it should and, if so, where is the mud coming from and why?; are pesticides being properly stored and used? Most observations of inappropriate behaviour or adverse effects should lead to common sense solutions. In some cases (e.g. unexplainable increases in illness or declines in fish numbers), there may be a need to require investigation by a technically qualified person.

Table APP 7.1 ; Example of monitoring water quality from a drainage project

Item	Monitoring Parameter	Sampling Frequency	Monitoring Location
Operation Phase			
Ground water quality	pH salinity Alkalinity conductivity ammonia Total nitrates Phosphorus Pesticide scans BOD COD	Monthly	tube wells, tile drain outfalls and/or monitoring wells
Surface water quality – receiving water	pH salinity Alkalinity conductivity ammonia Total nitrates Phosphorus Pesticide scans BOD COD Coliforms	Weekly	above and below project influence and at strategic stations below and above drainage outfalls at minimum 500 meters; if the river exceeds 3 meters depth, samples at all stations should be at surface and 60-80% of depth
Drainage quality	pH salinity Alkalinity conductivity ammonia Total nitrates Phosphorus Pesticide scans BOD COD Coliforms	Weekly	At point of discharge

App 7.2 Typical Sub-Project ESMPS

The following groups of agricultural activities have been considered:

- Livestock and Rangeland Management
- **Weirs and Reservoirs**
- Irrigation and Drainage
- Crop Production
- **Agro-industry (Processing Agricultural products)**

1.0 Livestock and Rangeland Management.

- Improved Livestock activities.
 - Chicken raising.
 - Piggery.
 - Sheep raising.
 - Cattle raising.
- Wool and mohair production.

No.	POTENTIAL NEGATIVE IMPACTS	MITIGATING MEASURE
-----	----------------------------	--------------------

1.	Degradation of vegetation resources due to overgrazing.	<ul style="list-style-type: none"> • Limitation of animal numbers. • Control of Length of grazing time on particular areas • Mixing of livestock species to maximize use of vegetation resource. • Reseeding and fodder production. • Cut-and –carry. • Strategic placement of water points and salt.
2.	<ul style="list-style-type: none"> • Increased soil erosion due to clearing of vegetation and trampling. • Increased siltation of surface waters. 	<ul style="list-style-type: none"> • Restriction of livestock access to unstable areas (e.g., steep Slopes). • Soil erosion control measures (e.g., reforestation, reseeded of grasses, land preparation, terracing).
3.	<ul style="list-style-type: none"> • Deterioration of soil fertility and physical characteristics through: <ul style="list-style-type: none"> ○ removal of vegetation ○ increased erosion ○ soil compaction 	Same as 1 and 2.
4.	Increased rapid runoff due to vegetation clearing and soil compaction (Decreased infiltration capacity)	<ul style="list-style-type: none"> • Water conservation measures and water spreading. • Same as 1 and 2.
5.	<ul style="list-style-type: none"> • Degradation of vegetation and soil around water points. • Over tapping of groundwater. • Lowering of water table and degradation of vegetation Locally by drilling and use of boreholes. 	<ul style="list-style-type: none"> • Development of many small capacity water sources. • Strategic placement of water points. • Control of use of water points (animal numbers and time of year) • Closure of permanent water sources when temporary pools and Streams are available. • Limitation of well capacity by choice of technologies (e.g., hand-Pumps or buckets instead of motor pumps).
6.	<ul style="list-style-type: none"> • Displacement or reduction of wildlife population by reduction of habitat. • Disruption of migratory routes. • Competition for food and water resources. • introduction of diseases. • Impacts of burning. • Increased poaching and killing of wildlife considered as pests or predators to livestock. 	<ul style="list-style-type: none"> • Planning and implementation of range management strategies (choice of species, Livestock numbers, grazing areas) that minimize negative impacts on wildlife. • Establishment of compensatory wildlife refuges. • Investigation of management of wildlife ranching which will help protect wildlife Resources.
7.	Pollution, environmental disruption and health hazards from Diseases and pest control measures	<ul style="list-style-type: none"> • Choice of chemical that is species-specific, short residence time (active period), and has low impact on other biologic resources. • Protective measures for field workers. • Spraying methods and timing to minimize potential of water pollution. • Selection of disease-resistant livestock breed.
8.	Reduction of genetic variability due to selective breeding	<ul style="list-style-type: none"> • Conservation of genetic diversity in-site (protection of wild relatives in natural Habit, maintaining variability within populations by breeding) and ex-situ (e.g., preservation of genetic material in `banks`).
9.	Negative effects of uncontrolled burning for brush control on soil and vegetation (deterioration of soil fertility and soil structure, altered wildlife habitat, destruction of vegetation)	Implementation of well-planned and controlled burning programs.
10.	Conversion of most tropical lowland forests for livestock production resulting in long-term environmental degradation and unsustainable production.	Avoidance of clearing such forests for livestock production.
11.	<p>Occupational Health Safety risks</p> <ul style="list-style-type: none"> • The movement of trucks to and from the site, the operation of various equipment and machinery and the actual agricultural activities will expose the workers to work-related accidents and injuries. • Pollutants such as dust and noise could also have negative implications for the health of workers. 	<ul style="list-style-type: none"> • All safety precautions must be enforced. • Provide PPE to all workers. • institute dust and noise suppression measures.
12.	<p>Social misdemeanour by construction workers</p> <p>Impacts associated with the contractor's camp include:</p> <ul style="list-style-type: none"> • disposal of liquid and solid wastes. 	<ul style="list-style-type: none"> • As a contractual obligation, contractors should be required to have an HIV/AIDS policy and a framework (responsible staff, action plan, etc) to implement it during

<ul style="list-style-type: none"> theft, alcoholism and sexually transmitted diseases (especially HIV/AIDS). 	<p>project execution.</p> <ul style="list-style-type: none"> Contractor to curb thefts and misbehaviour through a code of conduct. Contractor to manage any of its waste properly.
--	--

2.0 Weirs and Reservoirs

- Establishing/maintaining Small Storage Reservoirs (tanks, small dams/weirs).
- Development of Small Scale Farmer Driven Rainwater Harvesting.

No.	POTENTIAL NEGATIVE IMPACTS	MITIGATING MEASURE
1.	Soil erosion	<ul style="list-style-type: none"> Proper design and layout of structures avoiding too steep a gradient. Land leveling. Design of terraces on hillside minimizing surface erosion hazard.
2.	Negative environmental effects of construction: <ul style="list-style-type: none"> air and water pollution from construction and waste disposal soil erosion destruction of vegetation, sanitary and health problems from construction camps 	<ul style="list-style-type: none"> Measures to minimize impacts: <ul style="list-style-type: none"> air and water pollution control careful location of camps, buildings, borrow pits, quarries, spoil and disposal sites precautions to minimize erosion land reclamation
3.	Dislocation of people living in inundation zone.	<ul style="list-style-type: none"> Relocation of people to suitable area, provision of compensation in kind for resources lost, provision of adequate health services, infrastructure, and employment opportunities.
4.	Loss of land (agricultural, forest, range, wetlands) by inundation to form reservoir.	Siting of dam to decrease losses; decrease size of dam and reservoir; protect equal areas in region to offset losses.
5.	Loss of historic, cultural or aesthetic features by inundation.	Siting of dam or decrease of reservoir size to avoid loss; salvage or protection of cultural properties.
6.	Loss of wildlands and wildlife habitat.	Siting of dam or decrease of reservoir size to avoid/minimize loss; establishment of compensatory parks or reserved areas; animal rescue and relocation.
7.	Proliferation of aquatic weeds in reservoir and downstream impairing dam discharge, irrigation systems, navigation and fisheries and increasing water loss through transpiration.	Clearance of woody vegetation from inundation zone prior to flooding (nutrient removal); provide weed control measures; harvest of weeds for compost, fodder or biogas; regulation of water discharge and manipulation of water levels to discourage weed growth.
8.	Impediment to movement of livestock and humans.	Provision of passageways.
9.	Threat to historic, cultural or aesthetic features.	<ul style="list-style-type: none"> Siting of project to prevent loss. salvage or protection of cultural sites.
10.	Siting of project to less vulnerable area.	<ul style="list-style-type: none"> Siting of project to less vulnerable area. Limitation and regulation of water take-off to minimize problems to extent possible.
11.	Social misdemeanour by construction workers Impacts associated with the contractor's camp include: <ul style="list-style-type: none"> disposal of liquid and solid wastes. theft, alcoholism and sexually transmitted diseases (especially HIV/AIDS). 	<ul style="list-style-type: none"> As a contractual obligation, contractors should be required to have an HIV/AIDS policy and a framework (responsible staff, action plan, etc) to implement it during project execution. Contractor to curb thefts and misbehavior through a code of conduct. Contractor to manage any of its waste properly.

3.0 Irrigation and Drainage.

- Establishing/maintaining Small Scale gravity irrigation schemes.
- Improved homestead gardening e.g. using drip irrigation kits.

No.	POTENTIAL NEGATIVE IMPACTS	MITIGATING MEASURE
1.	Soil erosion (furrow, surface)	<ul style="list-style-type: none"> • Proper design and layout of furrows or field avoiding too steep a gradient. • Land leveling. • Design of terraces on hillside minimizing surface erosion hazard.
2.	Soil erosion (with sprinkler irrigation on hilly area).	Design of sprinkler system minimizing erosion hazard assuring infiltration rate exceeds application rate of the sprinklers.
3.	Waterlogging of soils.	<ul style="list-style-type: none"> • Regulation of water application to avoid overwatering (including controlled turn-out to allow cutting off water supply to irrigation ditches), • . installation and maintenance of adequate drainage system. • Use of lined canals or pipes to prevent seepage. • Use of sprinkler or drip irrigation.
4.	Salinization of soils	<ul style="list-style-type: none"> • Measures to avoid water logging: • Leaching of salts by flushing soils periodically • Cultivation of
5.	Scouring of canals	Design of canal system to minimize risk and use of lined canals.
6.	Clogging of canals by sediments.	Measures to minimize erosion on fields.
7.	Leaching of nutrients from soils.	<ul style="list-style-type: none"> • Avoidance of overwatering. • replacement of nutrients by fertilizers or crop rotations.
8.	Algal blooms and weed proliferation.	Reduction of input to release of nutrients (nitrogen and phosphorous) from fields.
9.	Clogging of canals by weeds.	<ul style="list-style-type: none"> • Design and management of canals to minimize weed growth. • . Provision of access to canals for treatment or removal of weeds.
10.	Deterioration of river water quality below irrigation project And contamination of local ground water (higher salinity Nutrients, agrochemicals) affecting fisheries and downstream users	<ul style="list-style-type: none"> • Improved water management; improved agricultural practices and control of inputs (particularly biocides and chemical fertilizers). • Imposition of water quality criteria.
11.	Reduction of downstream flows affecting flood plain use, flood plain ecology, riverine and estuarine fisheries, users of water, dilution of pollutants.	<ul style="list-style-type: none"> • Relocation or redesign of project. • . Regulation of takeoff to mitigate effects. • Compensatory measures where possible.
12.	Encroachment on swamps and other ecologically sensitive Areas.	Siting of projects to avoid or minimize encroachment on critical areas.
13.	Alteration or destruction of wildlife habitat or impediment to movement of wildlife.	<ul style="list-style-type: none"> • Siting of project to minimize loss or avoid encroachment on most sensitive or critical areas. • Establishment of compensatory parks or reserved areas. • Animal rescue and relocation.

		<ul style="list-style-type: none"> • Provision of corridors for movement.
14.	Impediment to movement of livestock and humans.	Provision of passageways.
15.	Threat to historic, cultural or aesthetic features.	<ul style="list-style-type: none"> • Siting of project to prevent loss. • salvage or protection of cultural sites.
16.	Siting of project to less vulnerable area.	<ul style="list-style-type: none"> • Siting of project to less vulnerable area. • Limitation and regulation of water take-off to minimize problems to extent possible.
17.	Dislocation of populations and communities.	<ul style="list-style-type: none"> • Siting of project to minimize effect. • Resettlement scheme ensuring at least equal standard of living.
18.	Introduction or increase in incidence of water-borne or water-related disease (schistosomiasis, malaria, onchocerciasis, etc.).	<ul style="list-style-type: none"> • Prevention measures: • use of lined canals or pipes to discourage vectors • Avoidance of stagnant or slowly moving water • use of straight or slightly curving canals • Installation of gates at canal ends to allow complete flushing • Filling or draining of borrow pits along canals and roads • disease prophylaxis • disease treatment
19.	Disease and health problems from use of wastewater in Irrigation.	<ul style="list-style-type: none"> • Wastewater treatment (e.g., settling ponds) prior to use. • Establishment and enforcement standards for wastewater use.
20.	Conflicts over water supply and inequalities in water Distribution throughout service area.	Means to ensure equitable distribution among users and monitor to assure adherence.
21.	Over pumping of groundwater.	Limitation of withdrawal so that it does not exceed 'safe yields' (recharge rate).
22.	<p>Occupational Health Safety risks</p> <ul style="list-style-type: none"> • The movement of trucks to and from the site, the operation of various equipment and machinery and the actual agricultural activities will expose the workers to work-related accidents and injuries. • Pollutants such as dust and noise could also have negative implications for the health of workers. 	<ul style="list-style-type: none"> • All safety precautions must be enforced. • Provide PPE to all workers. • institute dust and noise suppression measures.
23.	<p>Social misdemeanor by construction workers</p> <p>Impacts associated with the contractor's camp include:</p> <ul style="list-style-type: none"> • disposal of liquid and solid wastes. • theft, alcoholism and sexually transmitted diseases (especially HIV/AIDS). 	<ul style="list-style-type: none"> • As a contractual obligation, contractors should be required to have an HIV/AIDS policy and a framework (responsible staff, action plan, etc) to implement it during project execution. • Contractor to curb thefts and misbehaviour through a code of conduct. • Contractor to manage any of its waste properly.

4.0 Crop Production

- Asparagus, mushrooms and fruits for export.
- Growing tree seedlings (fruit trees, ornamental trees, fuel wood).
- Basic seed multiplication and sale.

No.	POTENTIAL NEGATIVE IMPACTS	MITIGATING MEASURE
1.	Soil erosion (furrow, surface)	<ul style="list-style-type: none"> • Proper design and layout of furrows or fields avoiding too steep a gradient. • Land leveling. • Design of terraces on hillside minimizing surface erosion hazard.
2.	Pollution, environmental disruption and health hazards from Diseases and pest control measures	<ul style="list-style-type: none"> • Choice of chemical that is species-specific, short residence time (active period), and has low impact on other biologic resources. • Protective measures for field workers. • Spraying methods and timing to minimize potential of water pollution. • Selection of disease-resistant crop varieties.
3.	Reduction of genetic variability due to selective breeding	Conservation of genetic diversity in-site (protection of wild relatives in natural Habit, maintaining variability within populations by breeding) and ex-situ (e.g., preservation of genetic material in 'banks').
4.	Negative effects of uncontrolled burning for brush control on soil and vegetation (deterioration of soil fertility and soil structure, altered wildlife habitat, destruction of vegetation)	Implementation of well-planned and controlled burning programs.
5.	Conflicts over water supply and inequalities in water Distribution throughout service area.	Means to ensure equitable distribution among users and monitor to assure adherence.
6.	Siting of project to less vulnerable area (marginal areas).	<ul style="list-style-type: none"> • Siting of project to less vulnerable area. • Limitation and regulation of water take-off to minimize problems to extent possible.
7.	Encroachment on swamps and other ecologically sensitive Areas (fragile ecosystems).	Siting of projects to avoid or minimize encroachment on critical areas.
8.	Disease and health problems from use of wastewater in Irrigation.	<ul style="list-style-type: none"> • Wastewater treatment (e.g., settling ponds) prior to use. • Establishment and enforcement standards for wastewater use.
15.	Threat to historic, cultural or aesthetic features.	<ul style="list-style-type: none"> • Siting of project to prevent loss. • salvage or protection of cultural sites.
16.	<p>Occupational Health Safety risks</p> <ul style="list-style-type: none"> • The movement of trucks to and from the site, the operation of various equipment and machinery and the actual agricultural activities will expose the workers to work-related accidents and injuries. <p>Pollutants such as dust and noise could also have negative implications for the health of workers.</p>	<ul style="list-style-type: none"> • All safety precautions must be enforced. • Provide PPE to all workers. • institute dust and noise suppression measures.

17.	<p>Social misdemeanour by construction workers</p> <p>Impacts associated with the contractor's camp include:</p> <ul style="list-style-type: none"> • disposal of liquid and solid wastes. • theft, alcoholism and sexually transmitted diseases (especially HIV/AIDS). 	<ul style="list-style-type: none"> • As a contractual obligation, contractors should be required to have an HIV/AIDS policy and a framework (responsible staff, action plan, etc) to implement it during project execution. • Contractor to curb thefts and misbehaviour through a code of conduct. • Contractor to manage any of its waste properly.
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5.0 Agro-industry (Processing Agricultural products)

- Canning fruits
- Milling cereals
- Milk products
- Meat products

No.	POTENTIAL NEGATIVE IMPACTS	MITIGATING MEASURE
1.	Soil erosion	<ul style="list-style-type: none"> • Proper design and layout of structures avoiding too steep a gradient. • Land leveling. • Design of terraces on hillside minimizing surface erosion hazard.
2.	<ul style="list-style-type: none"> • Increased soil erosion due to clearing of vegetation and trampling. • Increased siltation of surface waters. 	<ul style="list-style-type: none"> • Restriction of construction activities to good ground. • Soil erosion control measures (e.g., reforestation, terracing).
3.	Siting of plant or facility complex on/near sensitive habitats	<ul style="list-style-type: none"> • Location of plant in rural area away from estuaries, wetlands, or other sensitive or ecologically important habitats, or in industrial estate to minimize or concentrate the stress on local environment and services. • Involvement of natural resource agencies in review of siting alternatives.
4.	Siting of agro-industry along water courses leading to their eventual degradation.	<ul style="list-style-type: none"> • Site selection examining alternatives which minimize environmental effects and not preclude beneficial use of the water body using the following siting guidelines: <ul style="list-style-type: none"> ○ on a watercourse having a maximum dilution and waste absorbing capacity ○ in an area where wastewater can be reused with minimal treatment for agricultural or industrial purposes ○ within a municipality which is able to accept the plant wastes in their sewage treatment system ○ Improved water management; improved agricultural practices and control of inputs. ○ Proper handling of waste. ○ Imposition of water quality criteria.
5.	Siting of agro-industry so that air pollution problems are aggravated.	Location of plant at a high elevation above local topography, in an area not subject to air inversions, and where prevailing winds are away from populated areas.
6.	Environmental deterioration (erosion, contamination of water and soil loss of soil fertility, disruption of wildlife habitat, etc.) from intensification of agricultural land use.	Control of agricultural inputs and cropping/grazing practices to minimize environmental problems.
7.	Aggravation of solid waste problems in the area	<ul style="list-style-type: none"> • For facilities producing large volumes of waste, incorporation of the following guidelines in site selection: <ul style="list-style-type: none"> ○ plot size sufficient to provide a landfill or on-site disposal ○ proximity to a suitable disposal site ○ convenient for public/private contractors to collect and haul solid wastes for final disposal
8.	Water pollution from discharge of liquid effluents <ul style="list-style-type: none"> • Plant: TSS; temperature; pH • Materials storage piles runoff: TSS; pH 	<ul style="list-style-type: none"> • Laboratory analysis of liquid effluent (including cooling water runoff from waste piles) in O/G, TDS, TSS, BOD, COD and in-situ temperature monitoring.

No.	POTENTIAL NEGATIVE IMPACTS	MITIGATING MEASURE
	<ul style="list-style-type: none"> • Most agricultural, livestock, agro-industries, packaging and marketing operations produce solid waste. <ul style="list-style-type: none"> - Steam and hot water boilers produce ash - Fresh food and processed food markets, waste from canning - Livestock production units produce manure, dairy waste, waste from slaughter houses 	<ul style="list-style-type: none"> • Seek guidance of local environmental officers to identify acceptable disposal sites. • Waste from agricultural activities can be further processed into other uses, e.g. organic manure. Reuse and recycling must be preferred over disposal of the waste.
9.	Particulate emissions to the atmosphere from all plant operations.	Control of particulates by fabric filter collectors or electrostatic precipitators.
10.	Gaseous and odor emissions to the atmosphere from processing operations.	Control by natural scrubbing action of alkaline materials; an analysis of raw materials during feasibility stage of project can determine levels of sulfur to properly design emission control equipment.
11.	Accidental release of potentially hazardous solvents, acidic and alkaline materials.	Maintenance of storage and disposal areas to prevent accidental release; provide spill mitigation equipment.
12.	Occupational health effects on workers due to fugitive dust, materials handling, noise, or other process operations. Accidents occur at higher than normal frequency because of level of knowledge and skill.	Development of a Safety and Health Program in the facility designed to identify, evaluate, and control safety and health hazards at a specific level of detail to address the hazards to worker health and safety and procedures for employee protection, including any or all of the following: <ul style="list-style-type: none"> • site characterization and analysis • site control • training • medical surveillance • engineering controls, work practices and personal protective equipment • monitoring • information programs • handling raw and process materials • decontamination procedures • emergency response • illumination • regular safety meetings • sanitation at permanent and temporary facilities
13.	Disease and health problems from use of wastewater to irrigate crops.	<ul style="list-style-type: none"> • Wastewater treatment (e.g., settling ponds) prior to use. • Establishment and enforcement standards for wastewater use in crop production.
14.	Threat to historic, cultural or aesthetic features.	<ul style="list-style-type: none"> • Siting of project to prevent loss. • salvage or protection of cultural sites.
15.	Temporary Visual Intrusions <ul style="list-style-type: none"> • Rehabilitation and upgrading of agricultural facilities like Warehouses, processing plants and other possible facilities will change the characteristics of the area and leave a marred landscape. 	<ul style="list-style-type: none"> • Contractor should ensure minimum footprint of construction activities and provide decent accommodation for workers. • All altered landscapes (Sand pits, borrow pits, brick moulding sites etc) should be rehabilitated by the contractor.
13.	Noise <ul style="list-style-type: none"> • Noise and vibration caused by machines, site vehicles, pneumatic drills etc • Noise from the chicken, pigs or whatever 	<ul style="list-style-type: none"> • Contractor to avoid old equipment. • Heavy duty equipment to be minimized. • Noisy operations to be limited to certain times.

No.	POTENTIAL NEGATIVE IMPACTS	MITIGATING MEASURE
	<p>animals which are being raised.</p> <ul style="list-style-type: none"> • Noise from the processing of agricultural produce. 	<ul style="list-style-type: none"> • Noise levels to be limited to within acceptable levels. • Animal raising to be in designated areas to avoid being a nuisance to the general public. • Processing plants should be sited away from residential areas.
14.	<p>Social misdemeanor by construction workers</p> <ul style="list-style-type: none"> • Impacts associated with the contractor's camp include: • disposal of liquid and solid wastes. • theft, alcoholism and sexually transmitted diseases (especially HIV/AIDS). 	<ul style="list-style-type: none"> • As a contractual obligation, contractors should be required to have an HIV/AIDS policy and a framework (responsible staff, action plan, etc) to implement it during project execution. • Contractor to curb thefts and misbehaviour through a code of conduct. • Contractor to manage any of its waste properly.

APPENDIX 8 FORMAL GRIEVANCE REDRESS MECHANISM

1.0 INTRODUCTION

The grievance redress mechanism (GRM) is a system by which queries or clarifications about the project will be responded to, problems with implementation will be resolved, and complaints and grievances will be addressed efficiently and effectively.

2.0 PURPOSE OF THE GRM

The GRM will serve the following purpose:

- to be responsive to the needs of beneficiaries and to address and resolve their grievances;
- to serve as a conduit for soliciting inquiries, inviting suggestions, and increasing community participation;
- to collect information that can be used to improve operational performance;
- to enhance the project's legitimacy among stakeholders;
- to promote transparency and accountability;
- to deter fraud and corruption and mitigate project risks.

3.0 STRUCTURE OF THE GRM

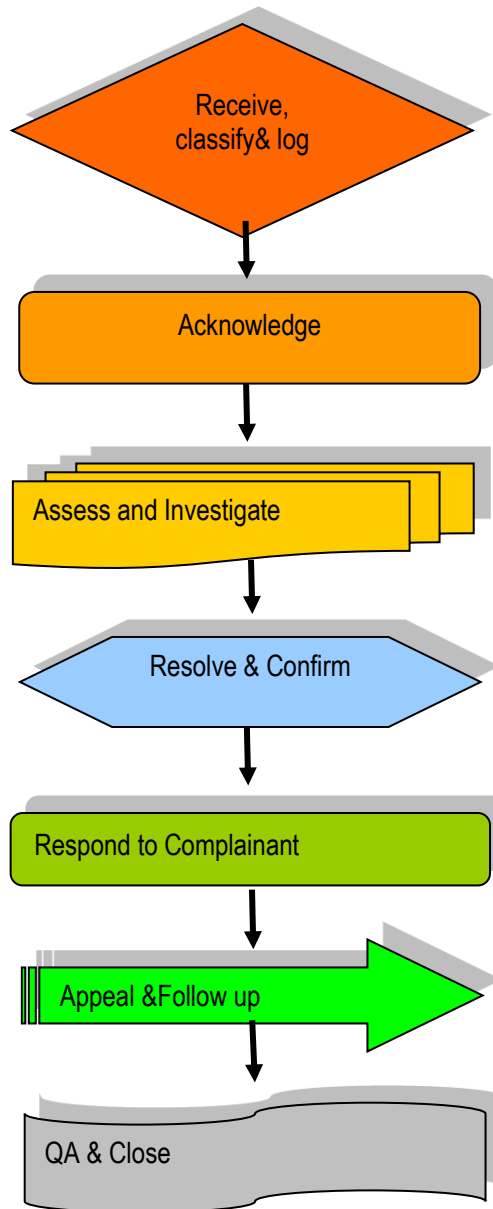
The GRM consists of a small number of components:

- The access point for impacted/concerned people
- Grievance log
- Acknowledgement stage
- Assessment stage
- Passing of resolution
- Response
- Room for appeal
- Case closure

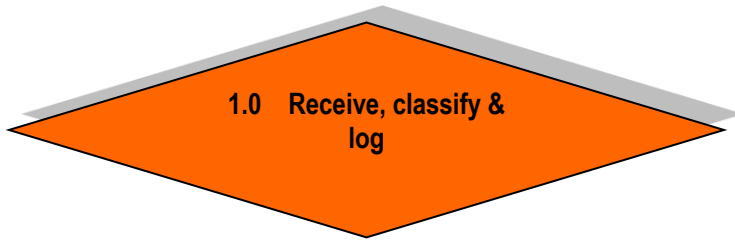
The components are summarized in the process flow diagram below.

Process Overview

The following key steps must be followed for all complaints received by TRADE staff:



The requirements for each of these steps is detailed below



1.0 Receive, classify & log

Summary

Ensure that all potential issues are captured and classified for escalation, review and action as required.

Receiving the Grievance:

The access points will be as close to the users as possible. An easily accessible and well publicized focal point or user-facing 'help desk' is the first step. This will be established at each sub-project, and TRADE Offices so that it will be seen as credible and accessible. The main issues for the access point include the following:

- Uptake channels should include some or all of the following:
 - phone hotline,
 - email,
 - mail,
 - SMS,
 - webpage,
 - or face-to-face.
- The uptake channels will be publicized and advertised via local media and the implementing agency.
- Verbal complaints should be recorded by staff for them to be considered.
- Many complaints may be resolved 'on the spot' and informally by the PMU staff but should also be logged in order to (i) encourage responsiveness; and (ii) ensure that repeated or low-level grievances are being noted in the system.
- The GRM should have the ability to handle anonymous complaints.

Typically, the complainant will be provided with a receipt and 'roadmap' telling him/her how the complaint process works and when to expect further information.

Logging and classifying:

Any complaint, issue or negative stakeholder interaction (whether this is formally logged by the complainant or not), must be logged and classified for action.

All of these complaints must be formally logged using the standard forms.

All complaints must be prioritised as follows:

- ✓ **Priority 1 – urgent**, potential high health and high business impact. **This require a response to the Complainant within three (3) working days.**
 - This should be used (sparingly) for major health issues where the complaint may have disastrous impacts on either human, the environment or TRADE itself.
 - Also, this could be used in a situation where the complainant may be in a position to influence or make public statements that would impact upon the TRADE reputation.
- ✓ **Priority 2, - non-urgent**, lower health environmental and social impact. This requires a response to the complainant within 2 working weeks.

- This should be used for most complaints with individual stakeholders, as this allows a reasonable time to collect information and produce a balanced response.
- Discretion and flexibility should be exercised in prioritising all complaints
 - The staff member logging the complaint should review the complaint and its priority with the Sub-project/ TRADE PMU Manager before proceeding to the next step.
 - The Sub-project/ TRADE PMU Manager will decide on the appropriate person(s) to carry out subsequent steps, including the investigation.
 - **All Priority 1 complaints must be escalated immediately to the TRADE PMU Manager.**

2.0 Acknowledge

Summary
 Ensure that every complaint receives a formal written acknowledgement, containing an expectation of when they will receive a response, and the person dealing with it.

- All complaints, regardless of priority, should receive a pro forma acknowledgement sent out 1st class mail on the day of receipt.

3.0 Assess & Investigate

Summary
 Follow up all aspects of the complaint, both internal and external, to ensure that the key facts are identified and clarified.

- The priority of the complaint will drive the timescale for completion (3 days for urgent or 2 weeks for non-urgent).
- All areas of interaction and communication should be established (who, what, where, when, why etc.) and documented where possible.

4.0 Resolve & Confirm

Summary
 Ensure that the final resolution is clear and fair. Also confirm the proposed action and resolution with another senior person (TRADE – PMU).

- Ensure that the proposed resolution meets corporate guidelines and does not prejudice TRADE in any unnecessary legal or financial manner.
- Document the proposed action and discuss and agree with the TRADE PMU Manager.
- Discuss and review the solution from both the corporate and complainant viewpoint to ensure fairness and clarity.
- The review should include recognition and documentation of any underlying issues that have contributed to the complaint and recommendations for actions to prevent further occurrence.
- This should then be reviewed as part of the bi-monthly quality assurance reviews.

5.0 Respond to Complainant

Summary

Provide the Complainant with the resolution within the timescales promised.

- The details of the findings and proposed resolution should be clearly explained (in written or verbal form as appropriate) to the complainant- within the agreed timescales.
- If this cannot be done on time the Complainant should be contacted by telephone to request further time.

6.0 Appeal & Follow up

Summary

Ensure that complaints are followed up to confirm that the complainants are satisfied with the response given. If not satisfied the Complainant is advised on the route for Appealing.

- All Priority 1 complaints and 95% of priority 2 complaints must be followed up within a reasonable timescale.
- This will be carried out by TRADE Administration team / TRADE PMU Manager's office.
- The follow-up should identify the following
 - Is the complainant satisfied with the response?
 - Did they feel that their complaint was properly and fairly handled?
- Any negative responses to these questions should be referred to TRADE PMU Managers for action and direct follow up with the complainant.
- The complainant is given room for appealing to the Ministry of Local Government or Courts of Law, if he is not satisfied.

7.0 QA & Close

Summary

Ensure that the TRADE - PMU as a whole is aware of the complaints and any underlying issues. Plan actions to remove these and prevent future recurrence.

- All complaints should be reviewed monthly as part of the quality assurance review meetings.
- Any complaints where action can be taken to avoid recurrence must be acted upon and raised with the appropriate managers/teams across the TRADE.