



Farmers Union of Malawi

NUTRITION SENSITIVE AGRICULTURE PILOT PROJECT

P163923

ENVIRONMENTAL & SOCIAL MANAGEMENT FRAMEWORK.

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MAY 2018

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Acronyms

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

SRBMP	Shire River Basin Management Programme
TCE	Technical Committee on the Environment

Units

ha	hectare
MK	Malawi Kwacha
mm	millimetre

EXECUTIVE SUMMARY

Introduction

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

The focus of investments on agricultural production and productivity has been on maize. Only a few investments have focused on other commodities. Consequently, there have been no significant improvements in production as well as productivity of other agricultural enterprises of equal importance. This has resulted in increased risks of smallholder farmers as well as the economy at large to both weather related as well as price risks.

This document serves as an Environmental and Social Management Framework for Nutrition Sensitive Agriculture Project. It is an adaptation of the Environmental and Social Management Framework for the Malawi Agriculture Sector Wide Approach Support Project II (ASWAp SP II). The proponent is Farmers Union of Malawi. Farmers Union of Malawi is seeking a grant of US\$2.73 Million to be financed through the World Bank by the Japanese Social Development Fund. The aim of the project is to increase production and consumption of nutritious foods and to improve access to livelihoods opportunities among selected female and male youths in targeted project areas in the districts of Mwanza and Ntchisi.

The proposed Nutrition Sensitive Agriculture Pilot Project is aligned with the World Bank Malawi Country Assistance Strategy (CAS), specifically, Theme 1 and 2 where the Bank envisages to "promote sustainable, diversified and inclusive growth" and to "enhance human and capital and reducing vulnerabilities". The proposed project aims to contribute to result areas 1.3 "strengthening productivity in a diversified economy, achieved through increased productivity and diversification, and ensuring sustainable availability of food for all Malawians at all time", and 2.1 on improved delivery of public services, in particular, improving coherence and integration of nutrition issues. The project will build on the ongoing WB-funded Support for Nutrition Improvement Component (SNIC) Project (co-funded with the Canadian Development Agency). The proposed pilot project is expected to complement SNIC activities, and to also benefit from institutional support created under that project, which is currently closing

Project description and Brief Description of Project Components

The proposed development objective (PDO) for the Nutrition Sensitive Agriculture Project is to increase production and consumption of nutritious foods and to improve access to livelihoods opportunities among selected female and male youths in targeted project areas in the districts of Mwanza and Ntchisi. The PDO will be achieved through: (i) mobilizing communities to enhance nutrition-sensitive agriculture, life skills, and nutrition of selected female and male adolescents aged 10-19 years through formation of girls only and boys' clubs/ groups. Groups of males and female adolescents will be formed and these will be the primary beneficiaries at community level; (ii) strengthening production and consumption of nutritious foods; and (iii) supporting project management, policy advocacy, monitoring and evaluation, and knowledge dissemination.

The project will benefit 33,080 persons. The primary beneficiaries are: (i) 6,000 adolescent youths aged 10-19 years (4,500 female youth and 1,500 male youth) and estimated 26,400 persons in their households; (ii) 600 peer leaders and care group promoters, and (iii) 80 community based extension workers.

Project Appraisal under the World Bank Safeguard Policies

The Nutrition Sensitive Agriculture has adopted findings of the initial evaluation of Malawi Agriculture Sector-wide Approach Support Project under World Bank Safeguards Policies. Under this project, component 2, subcomponent 2.1 which is about implementation of nutrition-sensitive agriculture interventions: This component will strengthen the production capacities of primary beneficiaries for nutritious crops and animal source food. The project will provide inputs to selected female and male adolescent 15-19 years to support livelihoods and improve nutrition through promotion of homestead gardens, small-animal husbandry and other suitable income generating activities. This has triggered two World Bank Safeguards Policies, and these are: Operational Policy 4.01 (Environmental Assessment), and Operational Policy 4:09 (Pest Management). The appraisal under category B of Operational Policy 4:01 (Environmental Assessment) entails that potential environmental and social impacts would have moderate significance in the environs, and there is need of environmental management plans to address the impacts. The main sources of impacts would be the use of pesticides and/or fertilizer, seeds and breeds of livestock under Sub Components 2.1 which would pose some environmental and health risks to both human beings and biodiversity in the environment. All of the identified negative impacts can be reduced or in some cases avoided, with timely implementation of the mitigation measures outlined in this report.

Object and Rationale for the Environmental and Social Management Framework

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

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

- a) environmental and social mitigation measures that can be applied and adopted;
- b) summary of the Bank's safeguard policies to ensure they are observed during project implementation
- c) environmental and Social Management Plan (ESMP)

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

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

Environmental and Social Impacts

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

Capacity Building and Training

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

Users of the Environmental and Social Management Framework

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

- (a) Donor Committee on Nutrition (DoNUTS)
- (b) A Project Steering Committee (PSC)
- (c) Farmers Union of Malawi
- (d) Ministry of Agriculture, Irrigation and Water Development
- (e) Department Nutrition, HIV/AIDS
- (f) District Councils, district and local structures
- (g) Politicians and local traditional leaders involved in Nutrition Sensitive Agriculture Project activities;
- (h) Government extension workers in the Nutrition Sensitive Agriculture Project project areas;
- (i) Non-governmental organizations involved in the activities of the Nutrition Sensitive Agriculture Project;

Approach and Methodology on Preparation of the Framework

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

Recommendations and Conclusion

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

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

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

- Use this Framework prior to any applicable project activity of the Nutrition Sensitive Agriculture Project;
- Environmental and social awareness education for the key stakeholders and affected communities;
- Training the project implementation personnel in the target districts to implement the ESMF and the screening process;
- Updating the ESMF when needed to respond to changing local conditions and to adjustments in project implementation plans; and

CHAPTER ONE: INTRODUCTION ON THE PROJECT

1.0 Background Information

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

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

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The proposed Nutrition Sensitive Agriculture Pilot Project is aligned with the World Bank Malawi Country Assistance Strategy (CAS), specifically, Theme 1 and 2 where the Bank envisages to "promote sustainable, diversified and inclusive growth" and to "enhance human and capital and reducing vulnerabilities". The proposed project aims to contribute to result areas 1.3 "strengthening productivity in a diversified economy, achieved through increased productivity and diversification, and ensuring sustainable availability of food for all Malawians at all time", and 2.1 on improved delivery of public services, in particular, improving coherence and integration of nutrition issues. The project will build on the ongoing WB-funded Support for Nutrition Improvement Component (SNIC) Project (co-funded with the Canadian Development Agency). The proposed pilot project is expected to complement SNIC activities, and to also benefit from institutional support created under that project, which is currently closing

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

1.2 Proponent and Implementing Agency

The proponent of the proposed Nutrition Sensitive Agriculture Project is the Farmers Union of Malawi. Contact details and addresses of the proponent are as follows:

Proponent Name: The Chief Executive Officer, Farmers Union of Malawi

Postal address: P.O. Box 30457, Lilongwe 3,

Telephone: 265-01-750222

E-mail: info@farmersunion.mw, pkapondamgaga@farmersunion.mw

Project Contacts: Mr. Prince Kapondamgaga/Mr. Jacob Nyirongo

1.3 Project Overview

The proposed development objective (PDO) for the Nutrition Sensitive Agriculture Project is to increase production and consumption of nutritious foods and to improve access to livelihoods opportunities among selected female and male youths in targeted project areas in the districts of Mwanza and Ntchisi. The PDO will be achieved through: (i) mobilizing communities to enhance nutrition-sensitive agriculture, life skills, and nutrition of selected female and male adolescents aged 10-19 years through formation of girls only and boys' clubs/ groups. Groups of males and female adolescents will be formed and these will be the primary beneficiaries at community level; (ii) strengthening production and consumption of nutritious foods; and (iii) supporting project management, policy advocacy, monitoring and evaluation, and knowledge dissemination.

The project will benefit 33,080 persons. The primary beneficiaries are: (i) 6,000 adolescent youths aged 10-19 years (4,500 female youth and 1,500 male youth) and estimated 26,400 persons in their households; (ii) 600 peer leaders and care group promoters, and (iii) 80 community based extension workers.

Under the proposed JSDF project, a community-driven innovative pilot project will be implemented to provide evidence to improve effectiveness and efficiency of investments for the Government and other development partners. It will build on global evidence and best practices, and contribute to building a model for a community-based and community-driven nutrition-sensitive agriculture approach to improve outcomes for targeted female youths in Malawi. The proposed project is aligned to various interventions supported by development partners, as coordinated through the Donor Nutrition Security Group (DoNutS), such as the Strengthening Agricultural and Nutrition Extension (SANE) project (November 2015 to November 2020); the EU-funded AFIKEPO ('let the children grow to their full potential'), EU's KULIMA on improved and sustainable farming in the AFIKEPO Districts; and the USAID Agricultural Diversification for Incomes and Nutrition (ADIN) project (September 2016 to September 2019). The proposed pilot project is expected to complement SNIC activities (project currently closing) through close cooperation between Care Group and agriculture extension officers' services so as to enrich nutrition awareness messaging and to enhance sustainability of nutrition-sensitive agriculture intervention, by targeting a beneficiaries group, specifically female and male adolescents, that have previously been overlooked, and to also benefit from institutional support and structures (including care groups) created under that SNIC project (as also adopted by Government of Malawi). These structures will be used as the basis to roll out implementation, while working closely with the direct project beneficiaries.

1.4 Project Appraisal of World Bank's Safeguard Policies

The Nutrition Sensitive Agriculture has adopted findings of the initial evaluation of Malawi Agriculture Sector-wide Approach Support Project under World Bank Safeguards Policies. Under this

project, component 2, subcomponent 2.1 which is about implementation of nutrition-sensitive agriculture interventions will strengthen the production capacities of primary beneficiaries for nutritious crops and animal source food. The project will provide inputs to selected female and male adolescent 15-19 years to support livelihoods and improve nutrition through promotion of homestead gardens, small-animal husbandry and other suitable income generating activities. This has triggered two World Bank Safeguards Policies, and these are: Operational Policy 4.01 (Environmental Assessment), and Operational Policy 4.09 (Pest Management). The appraisal under category B of Operational Policy 4.01 (Environmental Assessment) entails that potential environmental and social impacts would have moderate significance in the environs, and there is need of environmental management plans to address the impacts. The main sources of impacts would be the use of pesticides and/or fertilizer, seeds and breeds of livestock under Sub Components 2.1 which would pose some environmental and health risks to both human beings and biodiversity in the environment. All of the identified negative impacts can be reduced or in some cases avoided, with timely implementation of the mitigation measures outlined in this report.

1.5 Rationale for the Environmental and Social Management Framework

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

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

The ESMF provides mechanisms for ensuring that potential environmental and social impacts of the ASWAp-SP are identified, assessed and mitigated as appropriate, through an environmental and social screening process.

1.6 Aims and Objectives of the ESMF

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

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

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

1.7 Potential Users of the ESMF

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

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- f) District Councils, district and local structures
- g) Politicians and local traditional leaders involved in Nutrition Sensitive Agriculture Project activities;
- h) Government extension workers in the Nutrition Sensitive Agriculture Project areas;
- i) Non-governmental organizations involved in the activities of the Nutrition Sensitive Agriculture Project;

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

The focus of the ESMF is to provide a screening process for potential environmental and social impacts for planned future project activities of the Nutrition Sensitive Agriculture, and to recommend a generic management plan for addressing the potential negative impacts. In the development of the ESMF, consultations with key stakeholders were employed and are still ongoing. The rationale of these extensive consultations was to solicit views of a cross section of people, at the local, district, and Central Government level. The ESMF will include Annex 3 indicating the consultation events that took place (including dates and venues), the organizations and interest groups which participated, and the main issues discussed during the consultations. The consultation meetings were organized in order to ensure that all the information pertaining to the project and its likely impacts is disseminated to the District Councils and the concerned stakeholders. Particular focus was given to the issues related to the positive and negative impacts and the instruments which have been put in place to mitigate against the negative impacts. The consultation meetings further provided an opportunity for stakeholders to express their views and opinions on the project and to raise issues of concern relating to the Project. These extensive consultations were carried out to share the views of key stakeholders and to obtain their input in the identification of environmental and social impacts of the project. A list of individuals and institutions consulted is included in Annex 4.

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

- a. Review of existing national biophysical and social conditions. Some of the sources of information included Socio-economic Profiles and Environmental Reports;

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

1.10 Experiences and Lessons learnt from ASWAp SP I

Nutrition Sensitive Agriculture Project has adapted ASWAp-SP II ESMF. Lessons learnt from development and implementation of Safeguards instruments in ASWAp-SP provides a good foundation for implementation of safeguards instruments under this project.

For ASWAp SP I, ESIA and PMP were prepared and implemented. Implementation of the ESIA for ASWAp-SP I assisted staff and farmers with knowledge and information on how they can incorporate issues of environmental and social safeguards when implementing the various projects. ASWAp-SP I in collaboration with other projects (e.g. SRBMP, LDF and IRLADP) conducted country wide trainings to several staff on the ground who are imparting knowledge and skills on environmental management to farmers. However, implementation of ESIA at the district level relied on efforts put in by the EAD officer who need to be empowered and support the implementation of environmental issues in projects at district level. In Nutrition Sensitive Agriculture, Safeguards specialist/staff designate will be hired/allocated and will be responsible for the development and coordination for implementation of ESMPs.

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

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

CHAPTER TWO: PROJECT DESCRIPTION AND IMPLEMENTATION OF ACTIVITIES

2.1 Aim and Objectives

The proposed development objective (PDO) is to increase production and consumption of nutritious foods and to improve access to livelihoods opportunities among selected female and male youths in targeted project areas in the districts of Mwanza and Ntchisi. The PDO will be achieved through: (i) mobilizing communities to enhance nutrition-sensitive agriculture, life skills, and nutrition of selected female and male adolescents aged 10-19 years through formation of girls only and boys' clubs/ groups. Groups of males and female adolescents will be formed and these will be the primary beneficiaries at community level; (ii) strengthening production and consumption of nutritious foods; and (iii) supporting project management, policy advocacy, monitoring and evaluation, and knowledge dissemination.

The project will benefit 33,080 persons. The primary beneficiaries are: (i) 6,000 adolescent youths aged 10-19 years (4,500 female youth and 1,500 male youth) and estimated 26,400 persons in their households; (ii) 600 peer leaders and care group promoters, and (iii) 80 community based extension workers.

Component 1: Community mobilization and capacity building to enhance nutrition sensitive agriculture (USD 378,166).

This component will mobilize communities to improve nutrition-sensitive agriculture, nutrition and foster development of life skills including financial literacy and livelihood development skills. This component is divided into two sub components as discussed below:

Subcomponent 1.1 Community Mobilization

This will involve establishment of community structures in order to promote wide awareness and ownership of the project activities, and initiate meetings with stakeholders from various sectors (agriculture, health, education, and local government). Through these consultations, specific focal persons from each sector to support implementation will be identified. At district level, meetings will be held with the District Executive Committees (DEC) in particular, and the Project will be introduced to the District Nutrition Coordination Committee (DNCC). Orientation meetings will be rolled out to the Community Structures such as Village Development Committee (VDC) that comprise local leaders, Village Nutrition Coordination Committees (VNCC) where local extension workers from the above sectors and parents participate.

Subcomponent 1.2 Capacity Building

In line with the Multi Sector Nutrition Policy and Strategic Plan, front line Extension workers (and district subject matter specialists) from Agriculture, Health and Community Development will empower the group promoters, peer leaders to roll out the project activities on the ground, while community development assistants will coordinate the implementation of the work. Capacity building will be on community mobilization, group dynamics and governance, agronomy, food processing/utilization, homestead gardening, sexual reproductive health and gender. The project community development facilitators will coordinate the work with peer Leaders, care groups promoters who will directly work with the youth groups.

Component 2: Strengthening production and consumption of nutritious foods. (US\$1,660,943]

The primary target for this component shall be adolescents in and out of school, and pregnant/ lactating adolescent women in selected communities. The National Youth Policy, encourages youth 14 to 30

years to receive effective and relevant skills that empowers them to be productive in their daily livelihoods and to gain knowledge and skills needed for transition into viable livelihoods and nutrition. Activities under this Component will be in line also with the Labour Act 2000 recommending that children below age of 14 years can be exposed to various educational and technical training/vocational skills provided they are not hazardous to their health. Accordingly, this component will provide knowledge and skills required for increased production and consumption of nutritious foods. The component will be delivered through two subcomponents. Component 2.1 will aim at increasing production while component 2.2 will promote processing, consumption and utilization. Because of the differences in the two districts- Mwanza and Ntchisi, in Mwanza the focus shall be production, consumption and marketing while in Ntchisi where production is higher and yet less dietary diversity, the project will strengthen nutrition education and consumption. While detailed criteria for selection of interventions will be elaborated in the Project Implementation Manual (PIM), below are some details of the two sub-components:

Sub-component 2.1 Implementation of nutrition-sensitive agriculture interventions: This component will strengthen the production capacities of primary beneficiaries for nutritious crops and animal source food. The project will provide inputs to selected female and male adolescent 15-19 years to support livelihoods and improve nutrition through promotion of homestead gardens, small-animal husbandry and other suitable income generating activities. Specific activities will include: (i) Community consultations to identify climate-appropriate micronutrient-rich commodities in beneficiary areas; (ii) Local leaders and parents provides demonstration gardens and individual plots; (iii) Input packages provision (orange maize, orange fleshed sweet potatoes, bio-fortified beans, indigenous vegetables, cowpeas and chickens) to Peer Leaders and selected adolescent clubs/groups. FUM to work with Lilongwe University of Agriculture and Natural Resources (LUANAR) to provide technical skills in the production and marketing of indigenous vegetables that are nutritious, and facilitate links to markets; (iv) Development of demonstration sites by Peer Leaders to promote improved practices in micronutrient-rich crops and livestock, management of individual plots using the homestead gardening approach which will include crop and livestock management; (v) regular support from Government extension services. Where production surpasses consumption, excess production will be offered for sell through links to markets; (vi) mobilization of village savings and loans groups for youth in order to facilitate savings mobilization among youth for inclusive financial services for investment in income generating enterprises. Moreover, a just published review of nutrition-sensitive agriculture found a consistent and large modifying effect of market access on agriculture's impact on nutrition outcomes, especially for households living in remote areas. Markets can be leveraged to improve diets among poor households.²

The project will procure certified seeds for distribution to female and male adolescent youth for individual household gardens and demonstrations gardens. Where seed will be considered inadequate, seed multiplication among the adolescent youth groups will be encouraged, and pass on strategies promoted to ensure sustainable supply of improved seeds. Partnerships will be explored with DARS, CGIAR and private sector seed producers to ensure appropriate backstopping on the seed production processes as well as source of breeder seeds. The project will design programs for multiplication of appropriate small animals for both marketing and consumption. Interventions will be supported by Extension Services from Ministry of Agriculture, working closely with the Peer Leaders and group promoters. The project will promote animal health services through adequate mobilization and education of community members for drug revolving funds.

Expected outputs of Subcomponent 2.1 will include: (i) 600 Peer Leaders (2 PLs/group) and 300 youth groups receiving input packages and; (ii) youth groups trained on agriculture, nutrition and life skills, (iii) 300 demonstration plots established to promote homestead production of micronutrient-rich foods, IGAs, and links to markets, and (iv) 6000 youth and their households growing bio fortified crops and other nutritious crops or livestock.

²<https://www.ifpri.org/publication/nutrition-sensitive-agriculture-what-have-we-learned-and-where-do-we-go-here>

Sub-component 2.2 Nutrition Education and Communication

The objective of this component is to promote demand for nutritious foods and behavioral change on food consumption practices among beneficiary groups and their households. This will be achieved through nutrition education to improve awareness, knowledge and practices on consumption of diversified diets. The pilot project will promote education and awareness raising on sexual reproductive health practices and life skills towards improved nutrition amongst the adolescents. It is envisaged that packaged messages on sexual reproductive health rights (including girls' support with sanitary pads³) will reduce school drop-out, early pregnancies and early marriages, and hence contribute to healthy and empowered girls remaining in school.

Social and behavior change communication (SBCC) material will be developed to promote nutrition- and health--positive individual and group behavior, and to shift social attitudes and norms affecting those behaviors, including participation on youth and young women with children in programs that support positive change in nutrition and health behavior. The material will target adolescents and their households. These materials will include nutrition for the adolescent, sexual reproductive health rights for girls, life skills, use of bio fortified crops, animal-source foods, breast feeding, complementary feeding, as well as address cultural beliefs affecting women's and children's consumption of high nutritive value foods. The SBCC materials will be used to train the group promoters and peer leaders who would later cascade the training to their youth groups' members. Pregnant and lactating adolescents shall also be encouraged to join care groups for further training on feeding children 6-23 months and on nutrition for pregnant women. In addition, this sub-component will support group-based de-worming for all participating adolescents, and weekly iron folic acid (IFA) tablet supplementation for female adolescents of reproductive age (these inputs to be procured by the ministry of health).

In order to increase consumption of micro nutrients specific messages the project will contribute to the finalization of DNHA communication messages on use of bio fortification foods and a development of a training module on adolescent nutrition. Specific innovative activities for keeping the youth together will be developed. Specific activities will include: (iv) recipe development and cooking demonstrations, to promote acceptability and consumption of high nutrition foods among households. In addition, the project will work in partnership with Lilongwe University of Agriculture and Natural Resources (LUANAR) to build the capacity of these adolescents in the utilization of indigenous vegetables which are more nutritious.

Nutrition campaigns will take various forms. The pilot project will initiate a Nutrition Day approach which will be organized every three months in each community. Youth radio, TV, talk shows, road shows, posters, brochures, t-shirts, use of sports for education and communication and community drama groups will be used also and will be aimed at ensuring that nutrition information is widely disseminated.

Expected Outputs: The expected outputs for the component shall include: (i) BCC materials developed; (iii) number of nutrition campaigns; (iv) number of other disseminations efforts to transmit nutrition sensitive agriculture information.

³ During stakeholder consultation, it was evidenced that girls drop rates were higher due to inadequate sanitary support during their menstrual periods, hence great need for empowering the girls to stay in school. The project integrated such interventions on sexual reproductive health and efforts to reduce school dropout and early child marriages.

Component 3: Project Management and Administration, M&E, and Knowledge Management (USD690,891)

This component will be delivered through three sub components, as follows:

- (a) *Project Management and Administration*: This sub-component will cover operating costs for the project, including office space and supplies, computers, communications equipment, and transportation costs for delivering the project.
- (b) *Monitoring and Evaluation*: The implementing agency (FUM) will manage monitoring and evaluation activities, including: (i) Participatory monitoring strategy to engage beneficiaries in routine monitoring of program inputs and use and continuous quality improvement of project implementation
- (c) *Knowledge Dissemination and Learning*: The project will establish a process for regular documentation and dissemination of project achievements through, project launch, midterm workshop at District level, final workshops at both District and national levels.

2.2 Institutional Arrangements on Implementation

The project will be implemented in line with the multi-sectoral framework for implementing nutrition work in Malawi, in line with the nutrition strategy for the agriculture sector, National Agriculture Investment Programme (NAIP), and the National Nutrition Policy and Strategic Plan (NNPSP). In line with, this, the key stakeholders will be as follows:

- i. Farmers Union of Malawi – an NGO to leading the implementation and coordination of the project (main grant recipient). It will work closely with CISONA, in the spirit of ensuring coordination among non-state actors on nutrition work in Malawi.
- ii. Ministry of Agriculture, Irrigation and Water Development: This will be the lead Ministry in providing strategic direction of the project chairing the project Steering Committee. The Ministry has the department of agricultural extension services, which will technically coordinate nutrition work within the public sector.
- iii. Department Nutrition, HIV/AIDS – this department, is mandated to coordinate nutrition work across all sectors, in line with the National Nutrition Policy and Strategic Plan, and will co-chair the Project Steering Committee. The department will ensure that the project is well streamlines within the relevant structures at national level (e.g. nation nutrition committee), as well as at district level (e.g. District Nutrition Coordinating Committee)
- iv. District Councils, district and local structures – the project will use the existing structures at district level, like DNCC, district stakeholder panels, area stakeholder panels as entry points towards the community level. it will follow the decentralized structures, in line with Local Government Act.
- v. Donor Committee on Nutrition (DoNUTS) – which comprise of donors supporting the nutrition sector in Malawi will be used to share and ensure that there is good coordination among various projects.

A Project Steering Committee (PSC) will be formed to oversee the JSDF pilot project, and will comprise FUM, MOAIWD, DNHA, Ministry of Education and Ministry of Gender, Ministry of Health. PSC will be chaired by the Controller of Agriculture Extension and Training (CAETS) with DNHA as Co-Chair

2.3 Project Cost Estimates

The project financing plan is as follows:

Table 1: Project Costs by Components

Component	Estimated funding (US\$)
1. Community mobilization and capacity building to enhance nutrition sensitive agriculture	378,166
2. Strengthening production and consumption of nutritious foods.	1,660,943
3. Project Management and Administration, Monitoring and Evaluation, and Knowledge Management	690,891
Total Project Cost (Recipient Grant)	2,730,000

CHAPTER THREE: AGRICULTURE, FOOD SECURITY, NUTRITION AND THE SOCIO-ECONOMIC ENVIRONMENT

3.1 General Situation

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

Ntchisi district is located in the Central Region of Malawi while, 96 km north of Lilongwe the capital city of Malawi. The district lies along the Kasungu-Lilongwe plain and has a gentle slope on the western side and undulating hills in the eastern side. The total land area of the district is 1, 655 sq. km with a population of 258,499 (NSO 2008 projections) giving a population density of 156 persons per square kilometres. Poverty incidences in Malawi stand at 50.7% (IHS Report, 2011). Ntchisi is one of the districts with high poverty levels which is pegged at 41.4% (IHS Report 2011) comparing with 2008 poverty levels which was at 47.3%, poverty incidence has decreased by 5.9%, this has been attributed to various government interventions like farm input subsidy, conditional cash transfers, infrastructure developments and other interventions promoted by other non-governmental organizations.

Mwanza district is the second smallest district of the 13 districts in the Southern Region in terms of land area. It is bordered by the districts of Neno to the North-East, Chikwawa to the South, and the Peoples' Republic of Mozambique to the North-West. The total land area of the district is 826 square kilometres representing 0.88 percent of the total land area of Malawi. The District has a total population of 92,947 people with an intercensal annual growth rate of 4.1 which is the highest of all the districts in the country and higher than national population growth rate of 2.8%. Mwanza has more female population representing 52% of the total population.

Poverty in Malawi is widespread, with high population density and mainly dependent on agriculture sector. With 200 persons/km² and a population of 16.8 million, Malawi (a landlocked country bordering Tanzania, Zambia, and Mozambique) is one of Southern Africa's most densely populated countries, and its population is projected to reach 20 million by 2025. The majority of Malawians live in rural areas (85 percent) and pursue small-scale, rain fed agriculture. The absolute poverty nationwide declined only marginally between 2005 and 2011, from 52.4 percent to 50.7 percent,⁴ masking a widening gap between urban areas (where poverty fell from 25.4 percent to 17.3 percent) and rural areas (where poverty rose from 55.9 percent to 56.6 percent). Malawi ranks 170 of 188 countries in the 2015 Human Development Index. Women and girls are particularly more vulnerable to poverty, illiteracy, poor nutrition and low education enrollment at all levels. Malawi is a youthful population, with 48% under the age of 15 years. It ranks 145 out of 159 countries on the 2015 Gender Inequality Index, signaling wide gender inequalities on reproductive health, empowerment and economic activity. The World Economic Forum's Global Gender Gap Index 2016 places Malawi with index 0.7 at 67 of the 144 countries. The country has high burdens of maternal mortality (439 per 100,000 births), under five children mortality of 63 deaths per 1,000 live births), with fertility at 4.4 children (a drop from 6.7 children in 1992).

Despite good progress made towards addressing child and maternal mortality, stunting and fertility rates, the average figures remain high than the required international standards. The infant and under five mortality rates are at 42 and 63 deaths per 1,000 live births respectively, signaling a situation where 1 in every 16 children don't see their 5th birthday. Over 50% of the teenage girls' experience unplanned pregnancy, mostly as a result of early sex and marriage, low contraceptive use, low

⁴GoM, 3rd Integrated Household Survey 2010–11, household socio-economic characteristics report (August 2012).

educational levels, low socio-economic status, lack of knowledge of reproductive and sexual health, gender inequity, and physical/sexual violence. Even though the general fertility trends decreased from 6.7 children (in 1992) to currently 4.4 children, the lowest wealth category still experience high fertility (5.7 children) as compared to wealthiest category (2.9 children), signaling the importance of girl child education to reduce the high fertility trends. Malawi has made remarkable progress in improving child health outcomes as evidenced by reduction in infant and under-five mortalities. However, there has been slow progress in reducing malnutrition. Currently, the level of stunting is at 37%, anemia (28%), iron deficiency (22%), Vitamin A (94%), and high zinc deficiency of 60% across all age categories. The high prevalence of malnutrition has impacted greatly on education and health outcomes. The 2015 Cost of Hunger in Africa Study revealed that the Malawi economy loses US\$600 million annually due to the effects of child under-nutrition. This translates to approximately 10.3 percent of the Gross Domestic Product (2012), the losses as a result of increased healthcare costs, additional burdens to the education system and lower productivity by its workforce.

Sectoral and Institutional Frameworks on Food Security and Nutrition

The Malawi Growth and Development Strategy (MGDS) serves as the overarching economic and development framework, and outlines the country's medium-term objectives of poverty reduction through sustainable economic growth, social development, reduced vulnerabilities, and improved governance. It identifies improved nutrition under child development as one of the nine key priority areas. As the backbone of Malawi's economy, the agriculture sector significantly contributes to the national and household food security and nutrition⁵. It accounts for 30 percent of Gross Domestic Product (GDP) and generates over 80 percent of national export earnings. Agriculture employs 64.1 percent of the country's workforce⁶ comprising mostly the smallholder subsistence farmers.

Malawi's agriculture sector is dualistic, comprising of smallholder and the estate sub-sectors. More than 99 percent of households are involved in smallholder subsectors, contributing 80 percent of overall production.⁷ The smallholder cultivates 6.5 million ha of land that constitutes 85 percent of the total land. Smallholder farmers mostly grow food crops such as maize, rice, and legumes, and cash crops such as tea, tobacco, sugarcane and coffee. Livestock production in Malawi, which includes beef, dairy, goat, sheep, pig, chicken and eggs, among others, has steadily increased. Cattle population has been increasing at a rate of 3 percent per year in recent years (approximately 1.3 million), whereas goats number around 6.3 million. Both smallholders and estate farmers are involved in animal production, with more intensive production systems found on estate farms. Livestock production faces a number of challenges, including limited pasture, inadequate production and storage technologies in feed and breeding programmes; and insufficient animal health support infrastructure and services, such as dip tanks.

The National Agriculture Policy (NAIP, 2016-2020), launched in 2016, seeks to transform the agriculture sector to deliver increases in agricultural production, productivity, and real farm incomes. The National Agriculture Investment Plan (NAIP) (2017-2022) currently under finalization is meant to operationalize NAP. NAIP follows up to the Agriculture Sector Wide Approach (ASWAp) which was implemented from 2011-2016. Malawi's ASWAp strategy was aligned to the CAADP (Comprehensive Africa Agriculture Development Programme) pillars. Accordingly, Malawi has been allocating at least 13 percent of its national budget to agriculture, surpassing the CAADP's target of 10 percent.

The Government of Malawi (GOM) sees the fight against malnutrition, HIV, and AIDS as priorities for human development. To adequately address health challenges and raise the health status of all Malawians, the Government identified public health, sanitation, malaria, HIV/AIDS, and nutrition as

⁵ Draft National Agriculture Policy (2016).

⁶ The 2013 Malawi Labour Force Survey.

⁸ Investing in the Early Years; Country Planning Summary; Malawi.

key priority areas, and elevated agriculture and nutrition as key national policy priorities, to reduce poverty and food insecurity. In 2004, the GOM created the Department of Nutrition, HIV and AIDS (DNHA) to coordinate policy development and contribute to implementation in recognition of the multispectral nature and the public health priority of these two problems. DNHA has established and is leading a multi-sectoral nutrition platform at national, district, and sub-district levels.⁸

The National Nutrition Policy and Strategic Plan (NNPSP) 2016-2020 upholds the vision and guides national nutrition stakeholders with the framework and context within which sectoral and other strategic plans should be formulated, monitored and coordinated. The NNPSP is closely linked with ASWAp, and has established strong food and nutrition coordination mechanisms at both the national and community level. In line with the NNPSP, programs are implemented to address five outcomes: improved maternal nutrition and care; improved infant and young child feeding practices (outlined in the Infant and Young Child Nutrition Strategy 2009-2014); improved intake of essential micronutrients; prevention and treatment of common infectious diseases; and improved management of acute malnutrition.⁹

Malawi still faces a number of challenges, mainly emanating from the underlying causes of under-nutrition which is currently at 37% (DHS2015/16), including low household incomes, poor child feeding practices (61 percent exclusive breastfeeding up to 6 months; 7.8 percent of children 6-23 months received a minimum acceptable diet (DHS 2015/16) and care practices, poor hygiene and access to potable water, inadequate education and lack of adequate knowledge in nutrition which can lead to poor food processing and utilization. In addition, cultural beliefs which deny women and children from consumption of high nutritive value foods contribute to the list of challenges. Furthermore, with high levels of economic inequality in the country and high reliance on subsistence farming, frequent floods and other disasters mitigate against access to adequate nutritious foods for children under the age of five.

These challenges are compounded by high rates of early childbearing among female adolescents in Malawi, which may exacerbate their own health and nutrition deficits with subsequent effects on their offspring. Rates of early childbearing (i.e. bearing a child between ages 15 and 19) are extremely high in Malawi (29 percent of women aged 15-19 years have begun childbearing). Higher education of mothers is correlated with lower under-five child mortality rates; however, many female adolescents in Malawi drop out of school by age 10-12 years, often due to early marriage and/or pregnancy. This feeds the intergenerational cycle of malnutrition, as malnourished women are more likely to have malnourished children and the cycle continues.¹⁰

In response to the above challenges, the Government of Malawi has placed nutrition as one of the priority areas of the Malawi Growth and Development Strategy III. It has developed the National Nutrition Policy and Strategic Plan (NNPSP) to guide implementation of nutrition activities at all levels. The department of Nutrition, HIV and AIDS (DNHA) is mandated to provide oversight and coordination functions for nutrition response in Malawi. At district level, coordination is achieved through District Nutrition Coordination Committee at district level, cascading down to area and village level structures. Nutrition is also prioritized within the National Agriculture Policy, particularly on production and utilization of nutritious foods in order to improve minimum dietary diversity and ultimate nutrition.

Malawi has made some progress in improving the Monitoring and Evaluation of health sector activities including nutrition, HIV, and AIDS, although several other challenges remain. Notable progress made in recent years includes an approved Health Information System Policy, an eHealth strategy, HIV and

⁸Investing in the Early Years; Country Planning Summary; Malawi.

⁹Investing in the Early Years; Country Planning Summary; Malawi.

¹⁰Investing in the Early Years; Country Planning Summary; Malawi.

AIDS Management Information System, Community Management of Acute Malnutrition (CMAM) database, and Community-based Nutrition M&E System. Although the District Health Information System has been established to serve as a central data repository, data from the various vertical subsystems (including data from health surveys) are not integrated. Standards to ensure interoperability of data and systematic integration of systems are lacking. Furthermore, there is no harmonized approach to reporting from the various vertical programs, which negatively impacts comprehensive program planning and decision making. A set of standard indicators for nutrition M&E framework to measure progress on health outcomes for the country has also been lacking. DNHA has recently developed the National Nutrition Monitoring and Evaluation Framework that is set to include also nutrition-sensitive agriculture indicators.

With support from World Bank and other development partners including UNICEF, European Union, UKAID, JICA, Germany and USAID, DNHA has been coordinating the implementation of nutrition interventions since 2012. Notably, 4,586 care groups have been formed who are active in delivering a package of community-based nutrition (CBN) interventions primarily targeted to pregnant and lactating women and 0-23 months old young children in 14 of the country's 28 districts. In addition, all 14 District Councils (supported by World Bank nutrition project) use a common monitoring and evaluation framework to monitor performance on key nutrition indicators. In all the above intervention, the adolescents have often not been targeted, yet they remain a vulnerable group, and a window of opportunity to address future nutrition problems. For instance, there is high rates of malnutrition, including micronutrient deficiencies, coupled with early marriages, and teenage pregnancies, which the country is one of the highest in the world (50% girls get married by 18 years), also with high school dropout. This calls for a holistic approach to target adolescents to address nutrition issues, including an integrated package to improve their life skills, and empowerment. The JSDF funding is expected to fill such gap by improving production, consumption of nutritious foods, targeting the most vulnerable (adolescents), while integrating with life skills, empowerment and generation of learning to inform scale up and replication. This comes at a time when the World Bank project, "Support to Nutrition Improvement Component (SNIC)" (co-funded with the Canadian International Development Agency) is coming to an end. Major challenges from this project have concentrated around lack of involvement of agriculture extension officers in supported nutrition-sensitive agriculture interventions, leading thus to less than optimal results and sustainability of those especially as related to livestock and fruit trees. Also, most agriculture extension officers have limited or no capacity in topics such as food processing and utilization, compromising thus the effectiveness of nutrition increasing messages. Through the World Bank Group and development partner programs, a total of 4,586 CGs¹¹ have been formed, actively delivering a package of community-based nutrition (CBN) interventions primarily targeted to pregnant and lactating women and 0-23 months old young children in 14 of the country's 28 districts. In these districts, 75 percent of the caregivers with 0-23 months old children are benefiting from monthly care group activities; 37 percent of 6-23 months old children are receiving diets with adequate diversity; 26 percent of 0-59 months old children who have diarrhea are given increased fluids; 12,506 households with 0-23 months old children established backyard gardens; and 75 percent of 0-59 months old children with severe acute malnutrition are successfully treated. Sessions carried out in the context of CGs currently do not involve the agriculture extension officers in their activities (trainings, monitoring, and supervision. The project directly contributes towards supporting the financial gaps which exists in the National Nutrition Policy and Strategic Plan (2016-2020), particularly under the following two main pillars: (i) agriculture for nutrition security and improved maternal, infant and young children, care and practices – which has funding gap of approximately US\$31 million), and (ii) integration of behavioral change, communication and nutrition education – which has funding gap of approximately US\$42 million. The proposed JSDF project will tailor its support mainly based on these priority areas, while addressing challenges on adolescents, who have been vulnerable and not targeted as agents in the interventions to combat malnutrition and hunger.

¹¹ Care Group – a group of 10-15 men and women volunteers in a village who are responsible to deliver nutrition specific and sensitive interventions belonging to multiple sectors through assistance from respective line ministry workers.

Under the proposed JSDF project, a community-driven innovative pilot project will be implemented to provide evidence to improve effectiveness and efficiency of investments for the Government and other development partners. It will build on global evidence and best practices, and contribute to building a model for a community-based and community-driven nutrition-sensitive agriculture approach to improve outcomes for targeted female youths in Malawi. The proposed project is aligned with various interventions supported by development partners, as coordinated through the Donor Nutrition Security Group (DoNutS), such as the Strengthening Agricultural and Nutrition Extension (SANE) project (November 2015 to November 2020); the EU-funded AFIKEPO ('let the children grow to their full potential'), EU's KULIMA on improved and sustainable farming in the AFIKEPO Districts; and the USAID Agricultural Diversification for Incomes and Nutrition (ADIN) project (September 2016 to September 2019).

The proposed pilot project is expected to complement SNIC activities (project currently closing) through close cooperation between Care Group and agriculture extension officers' services so as to enrich nutrition awareness messaging and to enhance sustainability of nutrition-sensitive agriculture intervention, by targeting a beneficiaries group, specifically female and male adolescents, that have previously been overlooked, and to also benefit from institutional support and structures (including care groups) created under that SNIC project (as also adopted by Government of Malawi). These structures will be used as the basis to roll out implementation, while working closely with the direct project beneficiaries.

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

4.1 Policy Framework for Preparation of the Environment Impact Assessments

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

4.1.1 National Environmental Action Plan (NEAP)

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

4.1.2 National Environmental Policy (NEP)

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

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

The National Environmental Policy has implications on the proposed Nutrition Sensitive Agriculture Project in the country. Potential negative impacts increase of soil erosion from poor land management. As a requirement under the environmental policy, the project will require to upstream adequate measures for protection of soil from erosion. It will be necessary therefore that an appropriate environmental management plan will have to be implemented during implementation.

4.2 Administrative Framework for Environmental Impact Assessments

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

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

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

4.3 Legal Framework on Preparation of Environmental Impact Assessment

4.3.1 Environment Management Act (60:02), 1996

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

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

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

Section 16 of the Environment Management Act has provisions for the establishment, the powers and duties of an inter-agency Technical Committee on Environment (TCE). The Technical Committee on Environment is composed of multi-disciplinary professionals. It acts as a technical arm for the Department of Environmental Affairs which provides technical expertise and professional recommendations on matters of environmental planning and management including environmental impact assessment of projects. The Technical Committee on Environment (TCE) meets at least six times to scrutinize and review environmental impact assessments for projects and programmes as well as other matters. The Director of Environmental Affairs provides secretarial services to the Technical Committee on Environment on its operations.

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

Section 26 (3) of the act specifies that any project subject to environmental impact assessment cannot be issued with a license by any licensing authority in Malawi for implementation until a

satisfactory impact study report is approved and a certificate is issued by the Director of Environmental Affairs.

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

4.4.1 National Agriculture Policy (2016)

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

4.4.2 Local Government Act (1998)

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

Local councils in Mwanza and Ntchisi will collaborate with FUM in implementation of Nutrition Sensitive Agriculture Project in and ensure participation of Area Development Committees at grass roots level.

4.4.3 The Pesticide Act, 2000

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

The implications of this act on the Nutrition Sensitive Agriculture Project is that subcomponent 2.1 of Project deals with promotion of nutrition sensitive agriculture interventions. While the project will promote organic farming and integrated pest management, it is envisaged that some beneficiaries may use pesticides and drugs for small livestock such as chickens. Therefore, requirements of this Act should be observed when dealing with pesticides and agro-chemicals required to address the pests and diseases identified under the subcomponent. Therefore, there will be need to undertake the following steps:

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

4.4.4 National Land Resources Management Policy and Strategy (2000)

The National Land Resources Management Policy and Strategy was a first attempt at documenting a set of policy on land use and management in the history of Malawi and it is consistent with the recommendations made in the National Environmental Action Plan (NEAP), 1994. The policy addresses issues of land capability, land degradation, land suitability, land tenure, land conservation, soil erosion, water course systems and sustainable land use. Its overall policy goal is to promote the efficient, diversified and sustainable use of land based resources both for agriculture and other uses in order to avoid sectoral land use conflicts and ensure sustainable socio-economic development. This is important to the implementation process of the proposed project in that it supports the activities which aim to ensure that the envisaged increase in agricultural production and productivity promotes land resources conservation in accordance with the strategy.

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

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

4.4.6 Public Health Act (1966)

Public Health Act provides legal framework on planning and management of a wide range of health-related issues including environmental health, occupational health and solid wastes management. The implications on the project is that while the project focuses on nutrition activities for adolescents, it require integration of health and hygiene for the target populations and ensure that families have toilets and access to safe water.

4.4.7 National HIV/Aids Policy (2012)

The National HIV and Aids Policy (2012) highlights that HIV/Aids impact on the country is quite significant and affects a range of socio-economic activities be it in agriculture, fisheries, public sector, private sector, tourism, urban areas, rural areas among others. National HIV/Aids Policy identifies teenage girls and boys as among highly vulnerable people to transmission of HIV and Aids and other sexually transmitted diseases. The Project will focus on Sexual Reproductive Health interventions and ensure that issues of HIV and AIDS are integrated in the training manuals and awareness materials.

4.4.8 National Gender Policy (2000)

The National Gender Policy (2000) (currently under review) calls for integration of gender responsiveness in planning and implementation of development projects and programmes. It is considered that consideration of gender needs and benefits enhance poverty reduction in both rural and urban environments.

The proposed project is targeting girls and boys and as part of life skills development activities will focus on empowerment of the girl child.

4.5 Review of World Bank Safeguard Policies and Implications

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

The Nutrition Sensitive Agriculture Project has adapted Components 1, subcomponents 1.2, 1.3 and 1.4 under Malawi Agriculture Sector Wide Approach Project II which have triggered 2 related World Bank Safeguard Policies, and these are: Operational Policy 4.01 (Environmental Assessment), and Operational Policy 4.09 (Pest Management). The appraisal under category B of Operational Policy 4.01 (Environmental Assessment) entails that potential environmental and social impacts would have moderate significance in the environs, and there is need of environmental management plans to address the impacts. Cultivation disturbs soils, fauna and flora that naturally belong to such an environment. The use of pesticides on crops and storage would also pose some environmental and health risks to both human beings and biodiversity in the environment. All of the identified negative impacts can be reduced or in some cases avoided, with timely implementation of the mitigation measures outlined in Pest Management Plan.

4.5.1 Operational Policy 4:01 (Environmental Assessment)

The objective of Operational Policy 4:01 (Environmental Assessment) to ensure that Bank financed projects are environmentally sound and sustainable, and that decision-making is improved through appropriate analysis of actions and mitigation of their likely environmental impacts. This policy is triggered if a project is likely to have potential adverse environmental and social impacts in its area of influence. The rehabilitation of rural feeder roads under Malawi Agriculture Sector Wide Approach Project II are likely to have some negative environmental and social impacts, which will require mitigation. In order to comply with this safeguard policy, the following activities must be done prior to implementation of sub-projects. These include Environmental and social screening of sub-projects using a screening form attached as annex 3. The screening process will be done to appraise environmental and social risks and identify potential mitigation measures in advance.

4.5.2 Pest Management (Operational Policy 4.09)

Although the Nutrition Sensitive Agriculture will not directly engage in procurement and use of pesticides, it is considered that target families with adolescents might use pesticides on their farms and therefore will be supported with training and skills development on Integrated Pest Management including control of livestock diseases that might require handling of drugs. The use of pesticides on these sites will trigger Pest Management Operational Policy (OP 4.09). Although the project will not directly distribute pesticides, it is anticipated that the youth and their families might use pesticides in the control of pests in their farms, therefore the project will create awareness on safety and safe disposal of pesticides. This policy covers the procurement and use of pesticides on Bank funded or Bank supported project. The procurement of any pesticide in a Bank-financed project is contingent on an assessment of the nature and degree of associated risks, taking into account the proposed use and the intended users. The following criteria apply to the selection and use of pesticides in Bank-financed or bank supported projects:

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

The project will not develop a detailed **Integrated Pesticide Management Plan**, but will ensure that training materials on production of nutrition sensitive agriculture crops and management of livestock mainstream Integrated Pest Management.

4.6 Summary of Main Approvals /Licenses Required for Project Areas

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

List of statutory licenses required for project implementation

List of statutory approvals or licenses to be obtained	Regulatory frameworks.	Responsible department.	Responsible officer
2.Registration certificate for pesticide storage and use	Pesticide Act (2000)	Pesticide Control Board	Registrar of Pesticides

CHAPTER FIVE: ENVIRONMENTAL AND SOCIAL SETTING OF MALAWI

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

This study has identified that Components 1 and 2 under Malawi Agriculture Sector Wide Approach Project II have potential to trigger some negative impacts in the environment. However, the Nutrition Sensitive Agriculture Project will only adopt findings related to Component 1 of the ASWAp Project II. The main sources of impacts would use of pesticides on crops and livestock which would pose some environmental and health risks to both human beings and biodiversity in the environment. All of the identified negative impacts can be reduced or in some cases avoided, with timely implementation of the mitigation measures outlined in this report.

The purpose of this chapter is to provide an overview of the conditions of this environmental and social situation in two districts of Ntchisi and Mwanza.

5.1 Ntchisi District

5.1.1. Physical Description

Location and Size

Ntchisi district is located in the Central Region of Malawi, 96 km north of Lilongwe the capital city of Malawi. The district lies along the Kasungu-Lilongwe plain and has a gentle slope on the western side and undulating hills in the eastern side. The total land area of the district is 1, 655 sq. km with a population of 258,499 (NSO 2008 projections) giving a population density of 156 persons per square kilometre. The district is bordered by Dowa in the south west, Salima in the south east, Kasungu in the North, and Nkhonkhotakota in the north east.

Topography and Geology

Ntchisi has slopes ranging from 1 to 2 degrees and lies at an altitude of between 1,300 to 1,700 meters above the sea level. The eastern and north-eastern parts are hilly whereas the north, western and southern parts are generally flat. At the moment, no significant mineral deposits have been found in Ntchisi district. However, small deposits of graphite are found in Kambanga hills and south-eastern part of the district. Sulphide occurrences exist near Nanzake hills. Furthermore, trances of copper have been recorded at Sidza hills and Chilembwe area in the district. Currently, women producing pottery products use graphite but on a small scale. The commercial exploitation of minerals in the district could only be justified through geological surveys.

Soils

Ntchisi has sandy loam soils in upland areas, which are properly drained and relatively fertile. The good soil makes the district favourable for the production of horticultural crops. The *dambo* land, the down hills of the district, is characterized by ferruginous alluvial soils and sandy clay soils suitable for growing maize, millet, legumes and tobacco.

Climate and Climate Change

The mean annual temperature varies between 22 degrees Celsius in low altitude areas and 18 degrees Celsius in high altitude areas. In some cases, however, temperatures go as high as 36 degrees Celsius in the lower altitudes of Malomo during the months of October and November. The cooler areas located around Ntchisi Mountains in Kalira EPA have a mean temperature during the growing period of between 17.5 °C and 20.0°C and the temperatures go as low as 10°C in the cold season between May and July. The district normally has its rainy season between November/December and March/April. Annual rainfall ranges from 900mm to 1,500mm. Rainfall distribution is influenced by oro-graphic effects with areas of high elevation receiving higher rainfall. This is especially true with Kalira and part of

Chikwatula EPAs where Ntchisi Mountains extend. Chipuka and Malomo EPAs have little relief and located on lee side of the higher hills receive less rainfall. The district has been experiencing variability in the rainfall pattern over the years. There was a general decrease in the rainfall amounts received in the 2003/04 and a peak in 2006/07 whilst the 2009/10 there was another decrease with Kalira EPA has experiencing the most change as illustrated in the graph below.

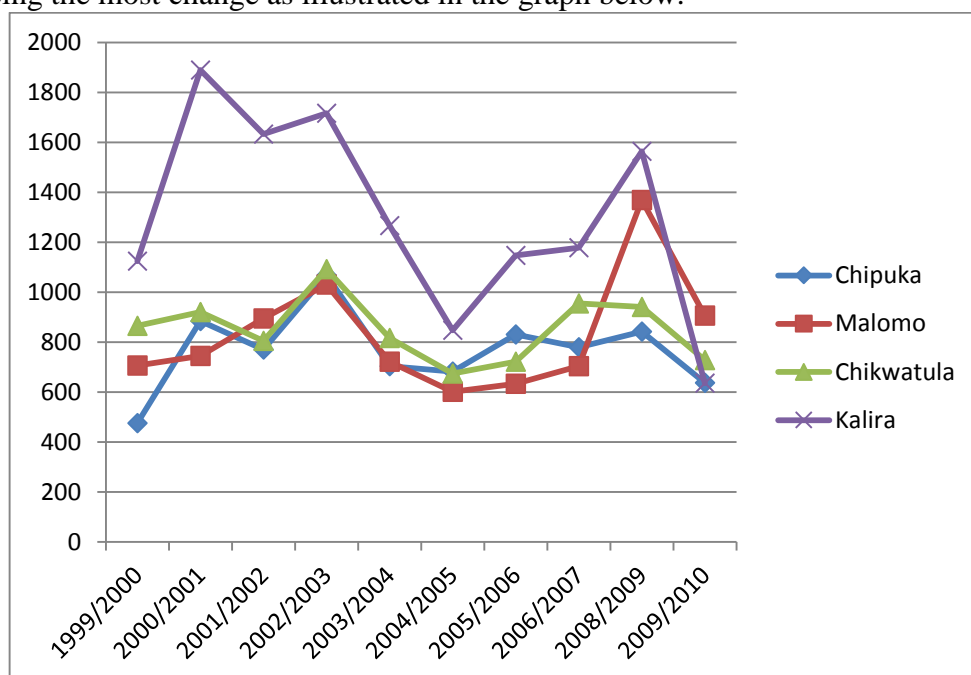


Chart 1: Linear graph for Rainfall pattern

Climatic variations contribute negatively to agricultural production and economy of the district. Low precipitation leads to moisture stress for crop production, drying up of streams and rivers and poor pasture regeneration. Irrigation cycles may drop to two or one due to inadequate availability of water in streams. Low agriculture production translates to food-insecurity and vulnerability to diseases by the population. High precipitation and temperatures also creates favourable micro-environment for vectors of diseases and increased incidents of communicable diseases.

Climate Change and Energy

The district is connected to ESCOM national grid from Salima sub-station through the Nkhotakota-Kasungu line at Malomo Trading Centre. Electricity remains the viable clean alternative energy source to biomass fuels however the accessibility to the source remains a big constraint. Even though there is a great demand for connection in the district the number of new connections is still low as only 52% of the total applicants for electricity were connected in the period of 2008 to 2011. This scenario induces pressure on the forest as households rely on biomass fuels. Un-availability of electricity and frequent black outs is a catalyst for deforestation as the masses rely on biomass fuel (Firewood is the dominant source of energy for cooking in the district with 96.8% (NSO, 2008) of the people utilising this source). This scenario compromises climate change mitigation efforts as the trees act as carbon sink to emissions. Through the natural process of photosynthesis the trees absorbs carbon dioxide and releases oxygen. Therefore the removal of carbon sinks (trees) undermines the mitigation efforts of climate change. The efforts in promotion of alternative energy sources to maintain the carbon sinks remain minimal as the district has only one NGO (TLC) implementing such. The potential for hydro power development at Chanyanga falls remains un-exploited leaving the forest under pressure.

Climate Change and water resources

Ntchisi is one of the districts in Malawi which has all types of water supply technologies and that 90% of the rural communities depend on groundwater supply systems through abstraction of subsurface water in form of boreholes and protected or rudimentary shallow wells. Constant supply of water from the underground system requires optimum replenishment of the underground aquifers through

precipitation. Climatic variations through low precipitation affect the replenishment on the aquifers and subsequently the supply of water to the population.

Ntchisi has experienced low yield of water supply from boreholes especially in the areas around TA Kalumo. The worst hit are Ng'ombe school where only 15 litres can be pumped per day and Katete village where it takes more than 10 strokes to pump water out of borehole water against the recommended 1 or 2 strokes. TA Kalumo is located in Chipuka EPA which experiences relatively low rainfall since 2006/07 as illustrated in the graph above. The Integrated water supply project constructed rainwater harvesting tanks in all seven Traditional Authorities' offices, at Water and DC's offices. However, they are under-utilized and some are non-functional. These tanks can play an important role in transferring knowledge and skills in water harvesting technologies to communities for household water supply and irrigation purposes in times of low rainfall levels. The technology has inadequate operation and maintenance interventions and financial support for replication to other areas of the district.

Mitigation and Adaptation of climate change in Agriculture

The agriculture sector is one of the most affected sectors with Climate change due to the overreliance of rain fed agriculture and mono-cropping by the farmers. Any slight climatic variation renders farmers vulnerable to food insecurity. Efforts are being made by both the Government and NGO's to assist the households in the district in adapting to the effects and impacts of climate change. The department of agriculture is promoting the cultivation of drought tolerant crops like cassava which act as safety nets in times of dry spells. The country wide promotion of cotton crop will improve farmers' income and also ensure them of a steady livelihood since cotton is drought resistant. Crop diversification is being encouraged as one of the adaptation measures to climate change as it disturbs the life cycle of pests and Disease.

Vegetation

The natural vegetation of Ntchisi District is typically Savannah with large pockets of protected forests and growing "*Miombo*" woodlands in hilly areas.

5.1.2 Administrative Structures and Local Politics

Formal Administrative Structures

Ntchisi District Council is a statutory body established under the Local Government (amendment) Act 2010 Section 5 of the Laws of Malawi. The Council is supposed to be headed by the Chairperson selected from amongst its 8 councillors each representing a ward in the district. The tenure of the Chairperson is one year. The Council has been without Councillors since March 2005, when the term of office for the previous Councillors ended. The other members of the District Council include 7 Chiefs, 4 elected Members of Parliament and 5 Co-opted members. The council must have the following service committees: Finance Committee; Development Committee; Education Committee; Works Committee Health and Environment Committee; and Appointment and Disciplinary Committee. It can establish other committees when need arises. The District Commissioner is the head of Council Secretariat, which is composed of Professional Heads of Government Sectors in the district. In addition to this, the Council works in collaboration with different Non-Governmental Organizations and Statutory Corporations.

District Executive Committee

This is a technical body that provides advice to the Council and its service committees. It is composed of all Heads of Departments and NGO/Development partners in the district. The District Executive has a membership of 40, chaired by the District Commissioner while the Director of Planning and Development is its secretary.

Area Development Committees (ADCs)

The Area Development Committee (ADC) is a representative body of all Village Development Committees under a Traditional Authority. The chairperson is elected among its members. Its membership could range from 25 to 60 under the patronage of the Chief. It is responsible for identifying and prioritizing needs. It mobilizes community resources and implements development interventions within the area. There are 7 ADCs in the district. Membership includes VDC Chairpersons and Vice Chairpersons, Chairperson of AEC, Representative of Women Groups, and representative of Youth Groups, Ward Councillors of the area, and Business and Religious Leaders.

Area Executive Committees (AECs)

An Area Executive Committee is composed of Extension workers of Government and Non-Governmental Organizations (NGOs) operating in the Traditional Area. Membership may come to 17 and should not go beyond 25 persons. It is the technical arm at the area level responsible for advising the ADCs on all aspects of development.

Village Development Committees (VDCs)

This is a representative body from a group of villages responsible for identifying needs and facilitating planning and development in local communities. The chairperson of the VDC is elected among its members. The VDC members are elected member from each village within the VDC, Ward Councilor, Four women representatives and elected extension worker representatives.

5.1.3 Demography and Settlement

Population Size and Characteristics

The district with an estimated size of 1655 km², has a projected population of about 258,499 (131,269 females and 127,230 males), 47,428 households (NSO: 2008, Population Census) giving a population density of 156 per sq. kilometre. The mean population growth rate is estimated at 3.0%, higher than the national population growth rate which is pegged at 2.8% looking for health care services.

Table 5: Demographic data for Ntchisi District

Indicator	2008	2009	2010	2011	2012
Total Population	224,098	234,480	241,590	249,914	258,499
Under 1 population	11,205	11,558	11,887	12,244	12,496
Under 5 population	38,097	39,298	40,417	41,629	42,485
Under 15 population	107,567	110,959	114,118	117,541	119,959
Women of child bearing age	51,543	53,168	54,682	56,322	57,480
Expected pregnancies	11,205	11,558	11,887	12,244	12,496
Expected deliveries	11,205	11,558	11,887	12,244	12,496
Expected Emergency Obstetric Complications	1,681	1,734	1,783	1,837	1,874

Source: NSO: 2008 Population Census, MDHS 2010

5.1.4 Forest Reserves and Wildlife

Forest Reserves

The district has four forest Reserves of which three are gazetted while one is proposed. The three covers an area of 15,150 ha while the proposed one is 2, 100 hectares representing approximately 10% of the total forest area.

Table 8: Forest Reserve

NAME OF RESERVE	YEAR GAZETTED	HECTERAGE
Ntchisi	1924	9,720
Kaombe	1964	3,880
Mndirasadzu	1974	1,550
Fumbati	Proposed	2,100

Source: Ntchisi SEP 2005-2008

Opening of new farms due to increased population, charcoal burning, felling of wood for brick burning and tobacco curing are the major threats to Ntchisi Forest Reserves. Species such as *kadale*, *muwanga*, *naphini* are favoured by charcoal burners due to their high calorific value. Statistics indicate that 96.8% of Ntchisi population use firewood while 1.5% uses charcoal (NSO 2008 household and housing conditions report). Mndirasadzu Forest reserve is highly subjected to charcoal production because of easy access. Approximately 20% of the reserve has been felled (trees have been cut down) for charcoal and fuel wood. Patrols and community sensitization have been carried out but little has changed.

Wildlife

The districts' bio-diversity is dominated by forest such as Ntchisi mountain forest (91.7 ha), Kaombe forest reserve (38ha), Mndirasadzu forest reserve (15.5 ha), Fumbati forest reserve (21 ha) and Nkhotakota wildlife reserve (1)¹². The vegetation is predominantly of Brachystagia hill woodland and low montane grasslands coupled with a wide variety of exotic and indigenous flora and fauna. Ntchisi forest reserve host a variety of wildlife as listed below Leopard, Serval Cat, African Civet, Spotted Hyena, Slender Mongoose, Side-striped jackal, Small-spotted Genet, Southern porcupine, Giant Rat, Common Molerat, Tree squirrel, Woodland Dormouse, Pouched Mouse, Chacma Baboon, Samango Monkey, Vervet Monkey, Lesser Bush baby, Bush pig, Bush buck, Red duiker, WahlbergsEpauletted, free tailed Bat, Vesper Bat. The Bua River in the northern part of the district is a host of crocodiles whilst three of Malawi's big five can be found in the Nkhotakota wildlife reserve these are the Lions, Leopard and Buffaloes. A wide variety of antelopes, monkeys and hyena's dominates the Nkhotakota Wildlife reserve.

Aquatic and Marine Resources

The district is endowed with water resources which are rivers, gravity springs, and groundwater. The district's major perennial rivers are Mpherere, Bua, Chafumbi, and Kaombe. Bua runs across the North western part of the district, Kaombe runs from the centre of the district to the North eastern side, Mpherere runs from the centre to join the Bua River at the West whilst Chafumbi from the South to the North Eastern side. These rivers have a significant impact on socio-economic value to the people of Ntchisi. For example Kaombe River, provides sustainable water supply to the people at the Boma through the Central Region Water Board. In recent years, the district has witnessed a massive increase in the use of surface water resources for irrigation farming especially from Chafumbi, Kaombe and Mpherere rivers through greenbelt initiative and other consumptive water uses like growing of vegetables. Currently the Bua river is being developed to have a Hydro-electric power generation plant.

The common fish species found in the Bua river are *Labeomesops* (Nchila), *Labeo-cylindricus* (Ningwi), *Barbusspp.*(Matemba), *Clarius-gariepinus* (Mlamba), and *Oreochromis-shiranus* (Makumba).

¹²The large part of Nkhotakota Wildlife Reserves is in Ntchisi

The two major rivers of Kaombe and Chafumbi run through protected area of Kaombe forest reserve whilst Bua has its source in Mchinji. The source of Mpherere is at Mkwambisi village in TA Kalumo; this area is heavily degraded and is in dire need of rehabilitation.

Environmental Critical Areas

Ntchisi forest reserve is listed as an important bird area (IBA-MW010) as it harbours unique bird species endemic to the area like the *Rhinolophus winnyi* (Bat). The forest is also an evergreen site and has a diversity of wildlife species. The wildlife reserve and forest serves as a source of energy, food and provides for ecosystem services like carbon sequestration, flood control, river catchment areas and habitat of wildlife species with lots of potential for eco-tourism.

The northern part of the district is endowed with lots of quarry stone and gravel which are very suitable for road construction and building endeavors. These resources can contribute to the development of district if utilised sustainably. As the district is developing it has attracted the urban migratory population which has resulted in increased waste generation around the Boma. The trading centre of Malomo is also generating lots of waste and the coming in of the rural growth centre will result in increased waste generation. Waste management has been a major challenge in the district both in the rural areas and urban centers. The district does not have a designated waste dumping site for the wastes generated in the markets and residential areas. The district does not even have skips where wastes could be temporarily stored before disposal on designated areas. The health facilities remain the only institutions having incinerators, placenta pits for waste disposal.

There has been major roads development in the district like the Mponela-Ntchisi and Kasungu-Nkhotakota. These projects have utilised quarry stone and gravel from the district however the mining was done in a degrading manner. The exploitation of quarry at Chalundu burrow pit was done up to the bedrock and this resulted in the release of water from the aquifers resulting into the creation of a pool. The pool is being utilised as a drinking place for both animals and people of the area. It is also used as a washing area, however the pool has no outlet which poses a health hazard.

5.2 Mwanza District

5.2.1 Physical Description

Location and Size

Mwanza District is located in the Southern Region of the Republic of Malawi; **see Map 1**. It is bordered by the districts of Neno to the North-East, Chikwawa to the South, and the Peoples' Republic of Mozambique to the North-West. The district is approximately 100 kilometres North of Blantyre City, the country's main commercial and financial centre, and about 320 kilometres South of Lilongwe, the Capital of Malawi. Mwanza is accessible through the M6 road from Mkulumadzi Bridge. The total land area of the district is 826 square kilometres.

Topography and Geology

The topography of Mwanza district is mountainous and hilly with several areas having slopes of more than 12 degrees and no large areas of flat land. There are 3 major agro-ecological zones in Mwanza:

- i. The Mwanza area is on moderate altitude (600-1000m) but the terrain is dissected and steep, though Mwanza Valley is a flat alluvial plain.
- ii. The Mkulumadzi Valley is comprised of a fragmented and highly dissected escarpment.
- iii. The Kirk-range to the west is an area of relatively high attitude exceeding 1200m above sea level. The terrain is dissected with slopes between 12 to 25 degrees.

There are at least 7 different types of minerals that underlie Mwanza. Of the minerals available in the district, Corundum and Zircon are the most abundant. Each has 2 identified deposits.

Soils

Mwanza district has soil types that vary from area to area. The following are the different kinds of soils according to area.

- i. Mkulumadzi Valley: The soils are shallow and rocky. It is essentially non-arable area.
- ii. Mwanza Valley: The soil is generally sandy clay, loam to clay, of good depth, permeable and well drained though gravel in some parts;
- iii. Kirk-range: The most common soils are deep, well drained red clays.

Climate

The climate is tropical and falls into two main seasons: wet and dry. The wet season starts in November and ends in March while the dry season occurs from April to October. However, it is not surprising for rains to be common during the month of April in some parts of the district.

Temperature

Mean annual temperature also varies widely over the district from 15°C within the Kirk Range to over 30°C in the Mkulumadzi Valley. The hottest months are from September to April with temperatures ranging from 23° C to 35°C. May to August are the coldest months where temperatures of 8°C to 15°C are registered.

Rainfall

The annual rainfall for Mwanza ranges from about 800mm in the Mkulumadzi Valley to over 1,200mm on the heights of the Kirk Range, Northwest of the district. February is the wettest month while September is the driest.

Vegetation

Mwanza has a type of vegetation mainly comprised of ‘*Miombo*’ woodlands. This type of woodland is dry deciduous and semi-deciduous dominated by the genera *Brachystegia* (Tsamba), *Julbernardia* (Mchenga) and *Isoberlinia* (Ntondo). Common tree species found in the woodland are *Sterculia quinqueloba* (Msetanyani), *Brachystegiaboekmii* (Mombo), *Burkea africana* (Mkalati), *Pterocarpus angolensis* (Mlombwa), *Adarsonia digitata* (Mlambe), and *Zizyphus mauritiana* (Masawo). *Diospyros mespiliformis* (Swamp Ebony/Mchenya), and *Khaya anthotheka* (mahogany/m'bawa) the preferred tree species for making curios, also abound in the woodland.

In some areas, the vegetation is interspersed with montane grassland, which provides habitats for diverse fauna like falcons, hares, guinea fowl, snakes and a wide range of bird species.

5.2.2 Administrative and Political Structures

Formal Administrative Structures, Local Government System, Functions, and Structures

District Council

Mwanza District Council is comprised of four (4) elected council members each representing each of the four (4) wards in the district. The district council is headed by a chairperson elected from among the four (4) councillors. And according to the Local Government Act of 1998 and the Local Government (Amendment) Act of 2010, there are ex-officio members that complete the composition of the district council. The composition of the ex-officio members is as follows: Members of Parliament from the constituencies that fall within the local government area as voting members; Traditional Authorities from the local government area, as non-voting members. Also five (5) persons, as non-voting members, are appointed by the elected members that cater for the interests of such special interest groups as the Council may determine. This entails nine ex-officio members for Mwanza District Council, since there are two Members of Parliament and two (2) Traditional Authorities plus the five (5) members of the interest groups. A District Commissioner (DC) heads the Council's Secretariat supported by professional heads of government departments.

Table 1.2 below shows the distribution of wards in the district:

No.	Name of Ward	Traditional Authority
1	Khudze	Kanduku
2	Mitseche	Kanduku
3	Mpandadzi	Nthache
4	Thambani	STA Govati

Source: Mwanza District Council 2010

The District Council is mandated to make and pass by-laws to govern its operations, as well as to raise funds for carrying out its functions, among other functions. Under the Local Government Act of 1998, and the Local Government (Amendment) Act of 2010, the full functions of the council are as follows:

- To make decisions on local governance and development for the local government area i.e. the district;
- To consolidate and promote local democratic institutions and democratic participation;
- To promote infrastructural and economic development through the formulation, approval and execution of district development plans within its jurisdiction;
- To mobilise resources within the local government area for governance and development;
- To maintain peace and security in the local government area in conjunction with the Malawi Police Service;
- To make by-laws for the good governance of the local government area;
- To appoint, develop, promote and discipline its staff;
- To cooperate with other to learn from their experience and exchange ideas and;
- To perform other functions including the registration of births and deaths and participate in the delivery of essential and local services as may be prescribed by Act of parliament.

The Act allows the Council to manage and maintain postal services, dispensaries, home craft centres, markets, rest houses, roads and bridges, disposal and treatment of waste within its area of jurisdiction. The Act also empowers it to borrow or lend money, levy rates on land or property and collect taxes and fees. It can also sue or be sued as an independent entity.

District Executive Committee (DEC)

This is comprised of all heads of departments and NGO partners in the district performing. It performs the role as the technical advisory body to the District Council. Mwanza District Executive Committee has a 54 membership. 51 are males and 4 are females.

Area Development Committees (ADCs)

An Area Development Committee is charged with the mobilization of community resources and the determination of development interventions in the area under traditional authority. The district is divided into 3 Traditional Authority (TA) areas, 2 of which are under the leadership of Chiefs while one is under a Sub Chief (**see Map 3**). Within each TA is organized an Area Development Committee (ADC) which is a representative of all Village Development Committees under a Traditional Authority. There are 3 ADCs in the district, one in each TA.

Area Executive Committees (AECs)

An Area Executive Committee is the technical arm at the area level responsible for advising the ADCs and VDCs on all aspects of local development. Extension workers of government agencies and NGOs operating in Traditional Areas compose the Area Executive Committees. There are three AECs in the district one in each TA.

Village Development Committees (VDCs)

A VDC is a representative body from a village or a group of villages responsible for identifying needs and facilitating planning and development in local communities. There are 123 villages in the district with 39 organized VDCs. For the distribution of VDCs in the district see Table 1.3.

Table 1.3: Number of Villages and VDC, by TA

Traditional Authority/ADC	Group village head	Number of Villages	Number of VDCs
Kanduku	5	48	15
Nthache	5	49	17
Govati	2	26	7
Total	12	123	39

Source: District Assembly (2005)

5.2.3 Demography and Settlement

Population Size and Characteristics

Mwanza District has a total population of 92,947 people with an intercensal annual growth rate of 4.1 which is the highest of all the districts in the country and higher than national population growth rate of 2.8%. Mwanza has more female population representing 52% of the total population. The population has increased from 63,220 persons in 1998 representing an increase of 47 percent. (Population and Housing census, 2008). The population for Mwanza is distributed among two T/As, one STA and Boma. T/A Kanduku has the highest population of 35,971 seconded by TA Nthache with 29,068. Mwanza Boma which is entirely in T/A Kanduku has a population of 14,226 while STA Govati has a population of 13,682. Population density for Mwanza district has increased from 77 persons per square kilometer in 1998, to 113 in 2008. Mwanza district is less densely populated when compared with Malawi (139) and the Southern Region (184). (*PHC 2008 Populations & Housing Census*). Mwanza Boma has highest population density of 2845 persons per square kilometer while TA Kanduku, is the least densely populated with 77 persons per square kilometer. The average household size for Mwanza is 4.4 (PHC 2008). This is calculated as the ratio of the total population to the number of households in an area. Mwanza Boma has the highest intercensal annual growth rate of 5.5 percent and TA Nthache has the lowest intercensal annual growth rate of 3.1 percent indicating that the highest population increase was at Mwanza Boma between 1998 and 2008.

Environment

Forest Reserves and Wildlife

The district has two forest reserves covering an area of 12,178 hectares. Thambani Forest Reserve is the biggest covering 10,670 hectares and Michiru Forest Reserve covers 1,508 hectares. Thambani and Michiru forest reserves constitute 14.7% of the total land area. Thambani Reserve is found in Traditional Authority Nthache and Sub-Traditional Authority Govati in Mwanza West Constituency while Michiru Forest Reserve is found in Traditional Authority Kanduku in Mwanza Central Constituency.

Thambani is the oldest gazetted Forest Reserve in the district. It was gazetted in 1927 to protect the various rivers catchment area, and to conserve the flora and fauna. Michiru was gazetted in 2000 to serve the same purposes as those for Thambani Forest reserve. The terrain is similar and the climate is the same in both Thambani and Michiru Forest reserves hence they have similar vegetation and wildlife. The common tree species in the forest reserves are *Brachystegia* spp., *Pericorpsis angolensis* (Muwanga), *Pterocarpus angolensis* (Mlombwa), *Uapacakirkiana* (Masuku), *Burkea Africana* (Mkalati) and *Khayaanthothea* (M'bawa). The trees are interspersed with grassland.

Tree Plantations

Apart from the two gazetted forest reserves, the district has 7 plantations; 2 of which are owned by the Forestry Department, 1 by Press Agriculture while the rest are owned by individuals. The plantations cover a total area of 89.8 hectares. Table... shows the names of the plantations, their sizes, ownership and tree species therein.

Village Forest Areas

In an effort to promote sustainable management and utilization of forest resources on customary land, some areas are set aside as Village Forest Areas (VFAs). The VFA's are protected forest areas within the Village and are managed on participatory basis by the rural communities.

Mwanza district is one of the biggest sources of charcoal in the country. The charcoal is produced from natural trees from either the gazetted forest reserves or from the non-gazetted forest areas despite efforts by the district council through its District Forest Office (DFO) and the District Environmental Office (EDO) to curb the malpractice. Illegal charcoal production is accelerating deforestation.

Environmental Hot Spots

The main environmental problems in Mwanza District are deforestation, land degradation (soil erosion and declining soil fertility), poor waste management and loss of biodiversity. The district is also not spared from climate change but this is a global issue whose causes and effects are not specific to the district.

These problems are caused by a combination of factors including high population growth, low household income and low awareness on environmental matters. In an effort to deal with these problems the district has established a district environmental subcommittee (DESC), which is a technical advisory body in all matters related to the environment.

At village level VNRMCS have also been formed and trained to deal with environmental problems at that level. In 2002 11 committees were trained, while in 2003 the number of committees that were trained was 7. There were 5 committees trained in 2004 and 10 in 2005. The training were facilitated by the both the forestry department and NGOs. Water point committees have also been formed to ensure provision of potable water at all times. There are 278 boreholes with a committee per borehole.

In addition to the committees various activities have been carried out to deal with the environmental problems being faced. Some of these activities are afforestation and reforestation, formation of committees in various aspects of natural resources management i.e. village natural resources management committee (VNRMCS) and catchments committees, training of district and area level committees in various areas of natural resources and environment management and awareness campaigns on environment and natural resources management. These efforts will be intensified in order to reduce the rate of environmental degradation that is taking place in the district. Environmental micro projects are also being implemented to address environmental degradation (see table 4.5). Some of the micro projects being implemented are waste management, afforestation and small-scale fish farming

5.3. Project Implementation Arrangement

The project will be implemented in line with the multi-sectoral framework for implementing nutrition work in Malawi, in line with the nutrition strategy for the agriculture sector, National Agriculture Investment Programme (NAIP), and the National Nutrition Policy and Strategic Plan (NNPSP). In line with, this, the key stakeholders will be as follows:

1. Farmers Union of Malawi – an NGO to leading the implementation and coordination of the project (main grant recipient). It will work closely with CISONA, in the spirit of ensuring coordination among non-state actors on nutrition work in Malawi.
2. Ministry of Agriculture, Irrigation and Water Development: This will be the lead Ministry in providing strategic direction of the project chairing the project Steering Committee. The Ministry has the department of agricultural extension services, which will technically coordinate nutrition work within the public sector.
3. Department Nutrition, HIV/AIDS – this department, is mandated to coordinate nutrition work across all sectors, in line with the National Nutrition Policy and Strategic Plan, and will co-chair the Project Steering Committee. The department will ensure that the project is well streamlines within the relevant structures at national level (e.g. nation nutrition committee), as well as at district level (e.g. District Nutrition Coordinating Committee)
4. District Councils, district and local structures – the project will use the existing structures at district level, like DNCC, district stakeholder panels, area stakeholder panels as entry points towards the community level. it will follow the decentralized structures, in line with Local Government Act.
5. Donor Committee on Nutrition (DoNUTS) – which comprise of donors supporting the nutrition sector in Malawi will be used to share and ensure that there is good coordination among various projects.
6. A Project Steering Committee (PSC) will be formed to oversee the JSDF pilot project, and will comprise FUM, MOAIWD, DNHA, Ministry of Education and Ministry of Gender, Ministry of

Health. PSC will be chaired by the Controller of Agriculture Extension and Training (CAETS) with DNHA as Co-Chair.

5.4 Health Situation and HIV & Aids Prevalence.

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

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

In Ntchisi District, the Health Sector offers the following health services to the general public: Community health, Family health, Prevention and disease control, curative, rehabilitative, maternal health, child health, and health promotion. The main objective embodied in the following statement: To raise the level of health status of all people by reducing the incidence of illness and occurrence of premature deaths in the population of Ntchisi district. In the past few years, some social indicators have improved while others have not. According to Malawi Demographic and Health Survey of 2010, infant mortality rate for Ntchisi is 61 deaths per 1,000 live births. The estimate of child mortality is 48 deaths per 1,000 live births children age 12-59 months, while the overall under-five mortality rate is 107 per 1,000 live births. The neonatal mortality is 22 deaths per 1,000 live births and post neonatal mortality rate is 26 deaths per 1,000 live births. Health care services in the district are provided by four main agencies. The Ministry of Health (MOH) provides about 84%, the Christian Health Association of Malawi provides 15%, and private and other partners provides 1% and mostly concentrates on respective catchment areas especially HIV/AIDS activities. The Christian Health Association of Malawi (CHAM) is made up of independent church related and other private voluntary agencies. CHAM facilities charge user fees for treatment with exception of growth monitoring; immunization and community based preventive services including treatment of specific communicable diseases such as TB, STD and leprosy.

In Mwanza, Health Services are provided at both government health facilities and private clinics. The district has four government health facilities, district Hospital, Thambani, Kunekunde and Tulonkhondo Health Centres and three private clinics, Banja la Mtsogolo, Wellness Centre and Tiyendebwino. Three of these government health facilities, District Hospital and, Kunekunde and Tulonkhondo Health Centres are in TA Kanduku –while Nthache has one health centre, Thambani. Mwanza district hospital has 250 bed capacity while Thambani has 12, Kunekunde, 5 and Tulonkhondo 7. Apart from health facilities, health services in hard to reach areas are provided through outreach clinics and villages clinics. The district has 30 outreach clinics and 78 village clinics. Outreach clinics provide immunization and family planning services to all under one children and mothers while village clinics provide curative services to all under five children in the community. Malaria, eye infection, pneumonia, malnutrition, anemia are some of the diseases and conditions that are managed at village clinics. Health Surveillance Assistance (HSAs) are trained to run both outreach and village clinics. In addition to district population, Mwanza DHO receives patient referrals from Chikhwawa district (Gaga, Chithumba and Chang'ambika Health Centers), due to geographical barrier, Mwanza river, that hinders them to refer their patients to Chikwawa District Hospital. Neno district also refer their patients to Mwanza DHO as their Hospital is not fully functional. Patients from Mozambique especially from Zobue and Mkondezi Health Centers also are referred to Mwanza District Hospital.

The National HIV and Aids Policy (2012) highlights that HIV/Aids impacts on the country is quite significant and affects a range of socio-economic activities be it in agriculture, fisheries, public sector, private sector, tourism, urban areas, rural areas among others. HIV and Aids prevalence in the country varies from one region to the other and from rural to urban areas. Current rates (2014) indicate that highest

rate is in the Southern Region at 15.18%, Central Region at 9.42% and lowest in Northern Region at 6.58%. Prevalence rate is 13.1% in urban areas and 10.61% in rural areas

In Ntchisi District, HIV and AIDS presents one of the key socio-economic challenges. In terms of prevalence rate, the district has one of the lowest figures estimated at 4% - which is lower than the national average of 10.96%. The main causes for the high HIV and AIDS prevalence in the district are; unprotected sex, sexual intercourse at a very early age, existence of high risk groups in the district, mother to child transmission of HIV, cases of sexual exploitation and increasing number of commercial sex workers

In Mwanza district, following the Millennium Development Goals (MGDs) 4, 5, and 6, the following health indicators were selected to determine the health status of Mwanza population. The indicators have been compared against national level. HIV prevalence among 15-49 age group is at 11% compared to National average of 12%. The new railway that passes through Mwanza and Neno has increased money circulation and people in need of sex workers. Even women from as far as Blantyre, Mulanje and Lilongwe have come to camp in Mwanza in search of a better market. The National HIV Action Framework categorises cross-border traders, long-distance drivers, sex workers and construction workers among the highly at-risk populations due to the mobile nature of their work. The Malawi Red Cross Society and Bridge II Project and Save the Children are some of the non-governmental organisations that have helped sensitise commercial sex workers and their customers to behavioural change as way of curbing HIV infections in the fast-growing district of Mwanza where sex work has always been a major concern.

There is a risk of increased spread of HIV/AIDS and sexually transmitted diseases during project implementation due to enhanced interaction among young people. This may result into long term negative impact at local level. With mitigation measures, the impacts can be reduced to low significance. Recommended mitigation measures include: (a) prioritize HIV and AIDS awareness and sensitization for behavioral change.

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

6.1 Public Consultations

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

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

In carrying out consultations for environmental and social management framework for Malawi Agricultural Sector Wide Approach Support Project II, the Project Secretariat carried out a series of consultations with different stakeholders. These include local people, farmers in selected districts, local government officials, extension workers, local leaders, non—governmental organizations and central government officials. The consultations took place in 2017 in Lilongwe, Ntchisi and Mwanza districts. For the Nutrition Sensitive Agriculture consultations targeted community members, young people and district stakeholders. The structure of the consultations was such that the consultations were made with senior officials at various government ministries and departments. These included mostly those from the Ministry of Agriculture, Irrigation and Water Development; selected non-governmental organizations and Civil Society Organizations in selected non-governmental organizations and consultations with extension workers and lead farmers. This ESMF will use the same consultation results as interventions for Nutrition Sensitive Agriculture Project were covered during consultations. The list of people and institutions consulted is presented as Annex4.

6.2. Summary of the Discussions

Discussions centered on the aims and objectives of the project, the scope of the project, design and modalities of implementation. More issues were raised during consultation with farmers as opposed to agricultural officials. However, concerns were raised regarding negative impacts that the project may consider addressing:

Soil erosion

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

Siltation of water bodies

Siltation of watercourses and dams has been experienced in the past. As time has progressed, farmers have seen that some perennial rivers have become seasonal due to siltation and sedimentation. There is vegetative growth in rivers hence drying up. It was suggested that

trees/reeds be planted along river banks, construction of check dams, contour ridging as well as implementation of good agricultural practices;

Transparency in beneficiary identification

Some local leaders register family members who do not qualify under the set identification criteria and the communities are afraid to report the malpractice because it starts with the local leadership – this was also noted and it was pointed out that instruments developed will look into all these issues

The issues raised during consultations will be incorporated in ESMF action plan. A detailed record of these discussions is attached as Annex3.

6.3 Public Disclosure

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

6.4 Grievance Redress Mechanisms

Implementation of projects activities under Nutrition Sensitive Agriculture will take place in Mwanza and Ntchisi Districts. Implementation of the activities may generate a number of challenges and complaints especially to those which relate to infringement of rights of sections of the society.

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

a) Project Grievance Redress Committee

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

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

- i) Venue of meetings to be closer to the project site or site convenient to the project affected people;
- ii) Project Managers to disclose all data and information from safeguard documents;
- iii) Complainants must agree a reasonable time to go through both environmental and social safeguards plans. Project affected households to provide feedback within specified time;
- iv) Complainants can submit a complaint or dispute orally or through phone or through a simple letter;
- v) The submission can be in any local language or Chichewa or English languages;
- vi) All complaints to be submitted through their local leader or civil society organization;

vii) Project Managers or government to provide feedback to all complaints/disputes within 5 days from date of Grievance Redress Committee;

vii) Complainants to be informed that in case of unsatisfactory response/resolution for Grievance

Redress Committee, they can seek redress from Judiciary.

viii) Complainants to be informed that in case of unsatisfactory response from Grievance

Redress Committee, they can seek redress from World Bank Redress Service. The Office of submission of the complaint is:

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

b) Traditional courts

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

c) Formal Courts

Formal courts include magistrates, High Court of Malawi and Supreme Court of Malawi. These courts handle both civil and criminal cases including child friendly courts. In regard to complaints and cases during the Nutrition Sensitive Agriculture Project, people with complaints will have opportunity to take cases to these courts for review and determination on course of action, cases theft of farm inputs as well as beating each other. Magistrate courts are located in all the two districts and these would help complainants to access the services of these magistrates in case such needs arise.

d) Access to World Bank Grievance Redress system

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

to the Bank 's Grievance Redress Service and the Bank Inspection Panel will be disclosed to the public during public disclosure of Environmental and Social Management Framework.

CHAPTER SEVEN: POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MANAGEMENT PLANS

A desk screening of the physical characteristics, socio-economic factors for Mwanza and Ntchisi Districts and project activities was conducted to determine potential environmental and social impacts that require development of plan/strategy for their management.

7.1 Summary of Potential Negative Environmental and Social Impacts

This step involved the systematic outline of the identified impacts, their sources/causes and the potential risks and effects of the impacts in the project impact area. The Nutrition Sensitive Agriculture Project has adapted the under Components 1, subcomponents 1.2, 1.3 and 1.4 under Malawi Agriculture Sector Wide Approach Project II which have triggered 2related World Bank Safeguard Policies, and these are: Operational Policy 4.01 (Environmental Assessment), and Operational Policy 4:09 (Pest Management). The appraisal under category B of Operational Policy 4:01 (Environmental Assessment) entails that potential environmental and social impacts would have moderate significance in the environs, and there is need of environmental management plans to address the impacts. Cultivation disturbs soils, fauna and flora that naturally belong to such an environment. The use of pesticides on crops and storage would also pose some environmental and health risks to both human beings and biodiversity in the environment. All of the identified negative impacts can be reduced or in some cases avoided, with timely implementation of the mitigation measures outlined in Pest Management Plan

Table 1: Outline of Potential Environmental and Social Impacts from Components 1 and 2

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

7.2 Summary of Cumulative Environmental and Social Impacts

7.2.1 Assessment of Potential Cumulative Negative Impacts

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

7.2.1.1 Cumulative impacts on under Sustainable Agricultural Productivity and Diversification

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

- a) *Salinization of soils due to application of fertilizers.* Salinization of soils normally occurs after over application of chemical fertilizers. Fertilizers are used on farmers' fields to enhance yields. Soils become less productive as it has less nutrients.
- b) *Pollution of surface and underground water resources.* Underground water resources on the farmers' fields would be polluted by agro-chemicals and fertilizers. Pollution of underground water leads to health risks to communities who use wells and boreholes for drinking and cooking water.
- c) *Depletion of micro-organism within the soil of farmers' fields.* Micro-organism play vital role in humus production and aeration of soils. Humus help to maintain water in soil. However, some micro-organisms will be depleted due to compaction of soils and heavy application of fertilizers and agro-chemicals on commercial farms.
- d) *Loss of vegetation due to expansion of farming land impacting on vegetation, wildlife and land and soil resources*

7.3 Environmental and Social Monitoring Plans

The environmental and social monitoring plans are presented in table below. The monitoring plans are in tabular format in order to clearly show linkages between recommended mitigation measures, monitoring indicators, frequent of monitoring and stakeholders responsible for monitoring.

[illegible]

-Increase in surface runoff and soil erosion due to increase in exposure of soil	-Implement soil conservation measures within all the fields (check dams, box ridges) -Promote CA for increased infiltration	DADO and Forestry Department	MK3,000,000.	<ul style="list-style-type: none"> • Ha under CA • Ha under Soil and Water conservation measures – box ridges, check dams. 	DADO and Forestry Department; Project Safeguards Specialist MK800,000	<ul style="list-style-type: none"> • Progress Reports 	Every six months
<ul style="list-style-type: none"> ▪ Risks of salinization 	<ul style="list-style-type: none"> • Apply correct amount of fertilizers • Add lime to soil where there are problems of salinization 	DADO and Forestry Department	MK1000,000.	<ul style="list-style-type: none"> • Regulation of correct fertilizers to soils 	DADO Project Safeguards Specialist MK500,000	Progress reports – soil analysis reports	Annually
<ul style="list-style-type: none"> ▪ Disturbance to the growth of micro - organisms 	<ul style="list-style-type: none"> • Use correct amount of fertilizers in fields • Use of a combination of organic fertilizers; minimum tillage and recycling of crop residues 	DADO and Forestry Department	Not applicable	<ul style="list-style-type: none"> ▪ Use of organic fertilizers, minimum tillage and residue recycling methods 	DADO and Forestry Department MK350,000 Project Safeguards Specialist	<ul style="list-style-type: none"> ▪ Progress reports 	Every six months
Impacts on water resources.							
<ul style="list-style-type: none"> ▪ Increase in suspended solids and sediments delivery into surface water resources. 	<ul style="list-style-type: none"> ▪ Water harvesting measures (box ridges, check dams) and improvement of soil infiltration 	DADO	K3,000,000	Water harvesting/land conservation measures in place	DADO	Progress reports	Every six months

• Exposure and pollution from agrochemicals	• Refer to PMP recommendations	DADO		Protective measures implemented as recommended in PMP	DADO	Progress reports	Every six months
Increase in siltation and deterioration of water quality in streams nearby	Maintenance of vegetative buffer zone along rivers to minimizes soil erosion into rivers	DADO and Land Resources Department	Not applicable	Vegetative buffer zones along rivers	DADO Project Safeguards Specialist MK500,000	Progress report	Every six months
Impacts on air.							
Air pollution from agro-chemicals	Refer to PMP recommendations	DADO		Protective measures implemented as recommended in PMP	DADO Project Safeguards Specialist	Progress reports	Every six months
Health and Safety of workers/people							
Exposure and poisoning from agrochemicals	-refer to PMP recommendations	DADO	MK500,000	Protective wear in use for handling agrochemicals Training done for staff Restriction to storage facilities	MoAIWD Departments; DESC Project Safeguards Specialist	Progress Reports Procurement/ stores records	Every six months

Spread of communicable diseases including HIV and AIDS	Conduct HIV and AIDS awareness and training through Reproductive Health Rights	DHO, District Education Manager and District Social Welfare Officer	Budget: MK2,000,000	Training of Peer Leaders	DHO, District Education Manager and District Social Welfare Officer	Progress Reports	Every six months
Conflict between Reproductive Health Rights and traditional value system	Include Traditional Advisors for girls as part of trainees on Reproductive Health Rights	DHO, District Education Manager and District Social Welfare Officer	Budget: MK2,000,000	Training of Traditional Sexual Reproductive Health Advisors (Anankungwi)	DHO, District Education Manager and District Social Welfare Officer	Progress Reports	Every six months

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Annex 1: Record of Discussions During Public Consultations for ESMF

ESMF Stakeholders for Ntchisi and Mwanza Districts

Agenda for the Meeting

The meeting was called for with the following agenda:

- Brief for the Adolescents Nutrition Sensitive Agriculture Project with funding from World Japanese Social Development Fund/World Bank
- Introduction to the Instruments for Safeguards Management and Draft ESMF

1.0 Introduction

A series of consultation meetings to feed into the ESMF were conducted targeting staff, youth and farmers. District level meetings were organized coordinated by District Councils and National Meetings were coordinated by the Ministry of Agriculture, Irrigation and Water Development and Department of Nutrition and HIV and AIDS. The meetings were facilitated by Farmers Union of Malawi.

It should also be noted that this section also captures relevant discussions from ASWAp II project which were conducted in Ntchisi district which targeted staff and farmers. A complete list of participants during the consultations is included.

2.0 Presentations

2.1 The Adolescent Nutrition Sensitive Agriculture Project

A presentation on the project was made highlighting the background of the project, JSDF Selection Criteria, JSDF pilot Team, summary of field assessment findings, project outline, Project components, indicators, outputs and priority activities.

2.1.1 Discussions

Priority Areas for the Adolescent Nutrition Sensitive Interventions in the Districts

Although there are a number of nutrition sensitive interventions (mainly SNIC-World Vision and World Relief and Save the Children), there are either gaps in implementation or challenges that affect the implementation

Challenges

- Lack of capacity mainly in Food processing and utilization- Most agriculture extension workers have qualifications in general agriculture, therefore they do not have full knowledge and skills to carry on nutrition activities
- Lack of involvement of agriculture staff in nutrition interventions- The care group sessions currently do not involve the AEDOs in either trainings, monitoring or supervisions. The lack of involvement of the agriculture sector has also led to low output in interventions like livestock distribution and even fruit trees (survival has been an issue).

As a recommendation, the program design should aim at building the capacity of extension workers

in the highlighted areas and ensure/strengthen involvement of agriculture staff in all care group intervention

Gaps

- Support the general nutrition interventions that are /not happening in the districts:
- District wide Nutrition surveys/assessments e.g HDDS/IDDS so that we may have current trends or data on dietary diversity in the district
- Support attendance to the Learning forums/ dissemination workshops/national events and tours that improve knowledge and practice
- Formation of nutrition clubs in schools
- Support home grown school garden initiatives- production and management of farm produces and management of fruit trees , planting , etc
- Nutrition campaigns/awareness campaigns e.g. in schools involving youths and in the general community on one area to encourage consumption of foods from the animal food group (which currently is still so low)
- Distribution of livestock (Chicken-BA)- support distribution, production and management of livestock
- Support distribution of fruit trees (pawpaw for Vit A plus they are early maturing),
- Distribution of OFSP
- Distribution of other bio fortified crops e.g. beans
- Provide visual aids for schools
- Promote establishment of demo plots that can support food processing and cookery sessions in schools
- Review meetings
- Coordination costs-Stationary for reporting and documentation, airtime, volume bundles, etc
- Support community trainings in food processing and utilization
- The project should include WASH component.
- Being a nutrition sensitive project there is need to link the project with DAESS structures
- The project should promote use of Energy saving stoves, need to link with forest department.
- Need to incorporate the district social environment committee during project implementation.
- There is need to refine implementation modalities to ensure that all relevant structures have been incorporated (DAESS and DNCC), at district level, entry remains the DEC.
- The proposed T/As are: Govati and Kanduku in Mwanza; T/ACHilooko in Ntchisi.

2.2 Environmental and Social Management Framework (ESMF)

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

- the ESMF is a tool which is being developed against the background that in the implementation of a project of this nature there are bound to be both positive and negative impacts; it is the positive impacts which in most cases outweigh the negative impacts for the project design to continue but there is need to have a policy document which will assist to guide processes when the impacts (especially negative ones) are experienced;

- the Framework will help us to develop instruments which can be used to attend to the issues experienced during implementation; thus, the ESMF takes care of the fact that although the project is to be implemented, the exact locations for each of the sub projects is not yet known and as such, the framework provides for procedures on how the impacts identified can be enhanced (if positive) or mitigated if negative; Hence the ESMF will provide for screening of the subprojects to identify impacts;

3.0 Comments and Questions

Following the presentation, a number of issues were raised especially pertaining to the anticipated positive as well as the negative impacts. These are presented from the perspectives of the staff and youth who will be targeted by the project:

3.1 Youth

3.1.1 Positive Impacts:

- there will be increased awareness on nutrition sensitive agriculture
- empowerment of youth through life skills training and nutrition
- increased income among youth through production of crops and raising of chickens and linkage to markets
- enhanced wellbeing and health of girls through reproductive health rights
- activities might encourage some school drop outs to go back to school

3.1.2 Negative Impacts:

- Possible conflict with traditional values on reproductive health rights – to be mitigated through targeting of traditional health rights advisors in the community
- Access to income might affect youth's focus on education, especially those that are at school – to be mitigated through mainstreaming awareness on the need of excelling in formal education as part of the empowerment training among the youth
- Formation of clubs will increase interface among youths and this may lead to more risky behavior – this will be mitigated through creating awareness on HIV and AIDS prevention and reproductive health rights training among youth
- Deforestation – trees will be cut down; to be mitigated through replanting of trees/afforestation
- Soil erosion will also be experienced because productive agricultural lands may be used – they will plant vetiver grass to control erosion and implement other soil conservation technologies like contour ridging;
- Cultivation is likely to also take place in steep slopes or mountains – youth indicated that they will mitigate using terracing, planting of vetiver grass, construction of check dams and planting of trees;
- Siltation of watercourses and dams – to be mitigated with planting of trees, contour ridging, good agricultural practices, avoid cultivating close to river banks;
- Increased exposure to agro-chemical pollutants – to be mitigated with use of protective clothing and training on safe handling of chemicals;
- Soil contamination – judicious use of pesticides and herbicides

3.2 Staff:

- Staff needed clarification on who will be the leading structure at the district council level. It was agreed that District Nutrition Coordination Committee should be the coordinating committee at district level.
- Staff also indicated that since the project has limited infrastructure investment, there will be limited environmental impacts. In which case, when the project is commissioned, the District Council through the District Environmental Office will lead a process of environmental screening after the project goes through the District Council.

4.0 Conclusion

The presentation assisted the Youths and Staff from government to appreciate the importance of instituting measures to address negative impacts which are likely to be experienced.

Annex 2: List of Participants during Consultations

2a. List of Staff

Districts : Ntchisi, Date: 24th October, 2017

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

35.	Gift Njolomole	WV-NGO	DF	0992653668
36.	Eliza Ziba	Agric	Student	0996515230
37.	Benson Chasambira	TAPP-NGO	Field Officer	0999044839
38.	Christopher Chinkhadze	Agric	AEDO	0994350167
39.	Gift Kapota	Agric	AEDO	0999059674
40.	Eliza Wickson	Agric	Field Assistant	0884350774
41.	Howard Mwambakulu	Agric	Enumerator	0884188449

2b: List of Farmers**Districts: Ntchisi Date : 24th October,2017**

SR NO	DZINA/NAME	Gender	UDIND O/POSITION	FONI NO
1.	Dustan Solomon	M	Secretary	08881311759/ 0999490109
2.	Steven Nkhoma	M	Member	0999749599
3.	MakiliwaniChisemphe	M	Oyangani raMsika	0999749599
4.	Anna Singo	F	Lidi farm	-
5.	AginesiMapulanga	F	Vice Secretary	09992525954
6.	MalitaJelemiya	F	Lidi Farm	
7.	Marcy Mapulanga	F	Settitarr	
8.	Fuloresi Steven	F	Member	0995359449
9.	Florence Kalowa	F	Member	
10.	Martha Chisinga	F	Chair Lady	0991958148
11.	Sadrack Folochiya	M	Member	0996566717
12.	Emma Kandaidi	F	Member	0998498768
13.	Mikiel Missi			0995654663
14.	Misheck Chawia	M	Member	0991487852
15.	Manford Katonge	M	Farm leader	09999190020
16.	Evely Chigoli	F	Treasurer	0991521570
17.	Spiano Kamwala	M	Chairman	0991487852
18.	Emmanuel Silvesta	M	Member	0997937939
19.	Medson Mzelezea	M	Member	
20.	Yona Matewere	M	Member	
21.	Lunia Bowa	F	Member	
22.	Mercy Mapulanga	F	Member	
23.	Zecharia Chitsamba	M	Member	
24.	Cliford Banda	M	Member	
25.	Veronica Kamwala	F	Member	
26.	Mercy Jeptala	F	Member	
27.	Trex Chananga	M	Member	
28.	Anna Singo	F	Member	
29.	Generate Jonathan	F	Member	

30.	Chisomo Banda	F	Member	
31.	Elia Sambo	M	Member	
32.	Gladwell Malipenga	M	Member	
33.	Grace Chifu	F	Member	
34.	Esta Batison	F	Member	
35.	Regina James	F	Member	
36.	Joyce Jekapu	F	Member	
37.	Colleta Banda	F	Member	
38.	Stella Wilson	F	Member	
39.	Magrete Tomas	F	Member	
40.	Mpasulana Mpinganjira	M	Member	
41.	Sana Chitute	F	Member	
42.	Getrude Zezala	F	Member	
43.	Grace Andrea	F	Member	
44.	Eveness Majamanda	F	Member	
45.	Agnsess Chikanamba	F	Member	
46.	Lucy Daniel	F	Farmer	
47.	Alice Paliani	F	Farmer	
48.	Likiness Yakobe	F	Member	
49.	Wadson Bello	M	Member	
50.	Davie Ngwende	M	Member	
51.	Peter Kavumbula	M	Member	
52.	Bertha Zimba	F	Member	
53.	Jossam Lumbe	M	Member	
54.	Hellens Kalowanjombe	F	Member	
55.	Marria Mwale	F	Member	
56.	Matco Richard	M	Member	
57.	Juliasi Phiri	M	Member	
58.	Aganess Kamwala	F	Member	
59.	Gift Banda	M	Member	
60.	Agartha Mluntha	F	Member	
61.	Janet Benjamin	F	Member	
62.	Olipa Banda	F	Member	
63.	Sinolia Nthenda	F	Member	
64.	Alice Paliani	F	Member	
65.	Sara Chitute	F	Member	
66.	Stella Wilson	F	Member	
67.	Agness Nthala	F	Member	
68.	Malita Jeremia	F	Member	
69.	Rose Kachepa	F	Member	
70.	Felestina Mayembe	F	Member	

71.	Lustia Mvula	F	Member	
72.	Agness Cholamokanda	F	Member	
73.	Grace Jeriko	F	Member	0996015603
74.	Enelesi Nkolola	F	Member	0992110554
75.	Sisiliya Shawa	F	Member	0997528639

2 c: List of staff during second Stakeholder Workshop, 02 May 2018

No	Name	Position/Organisation	Phone Number	Email
1	Japhet Zingani	Ministry of Agriculture, Irrigation and Water Development - Ntchisi DAO	999669457	jzingani@gmail.com
2	Innocent Semakweri	Ntchisi - DC (DPD)	999418003	innosemakweri@yahoo.com.au
3	Martha Mwale	Department of Agriculture Extension Services	995910379	martha.mwale@yahoo.com
4	Marcus Mponda	Department of Agriculture Extension Services	881570396	mpondamarcus@gmail.com
5	Roseby Namagowa	Farmers Union of Malawi	991150232	rcnamagowa@farmersunion.mw
6	Modesta Mlia Tembo	Farmers Union of Malawi	888119385	modestatembo@farmersunion.mw
7	Ezra Mbendera	Agriculture – Mwanza	993898215	ezrambendera@yahoo.com
8	Edgar Chihana	Mwanza District Council	88544991	edgarchihana@gmail.com
9	Jacob Nyirongo	Director Programme Development and Learning, Farmers Union	997921846	jnyirongo@farmersunion.mw
10	Gregory Kulemeka	District Forestry Officer - Mwanza		
11	Tamanda Chinchembere	District Youth Officer - Mwanza		
12	Aaron Macheka	District Social Welfare Officer - Mwanza		
13	Stuart Maganizo	Youth Network Coordinator - Mwanza		
14	Blessings Botha	World Bank		
15	Gloria Chinguo	World Bank		
16	Valens Mwumvaneza	World Bank		
17	Susan Namangale	World Bank		
18	Blessings Muwalo	DNHA		

2 d: Participants List (Youth): Njanjama Village, T/A Thache, Mwanza District Date: 25/05/2018

No.	NAME	GENDER	CELL
1	William Yonass	Male	
2	Robert Pamdule	Male	
3	Rhoda Langson	Female	
4	Allan Jundani	Female	888063890
5	Edna William	Female	
6	Mwayi Chibowa	Female	
7	Jack Pael	Male	885525864
8	Wyson Yakobe	Male	882433761
9	Gift Peter	Female	
10	Blessings Ngaiae	Male	
11	Hanna Stephan	Female	802434522
12	Singret Njelina	Female	
13	Yohane Kachipande	Male	888417658
15	Sonyezo Wyson	Female	
16	Linda Chiwoyo	Female	
17	Rhoda Chiwoyo	Female	
18	Eluby John	Female	
19	Alice Banda	Female	
20	Cecilia Francisco	Female	
21	Charles Kanzibule	Male	
22	Triza Elesoni	Female	



Youth Group: Njanjama Village, Mwanza



Girls only group, Njanjama Village, Mwanza

2 e: Participants List (Youth): Chiwembu Village, TA Thache, Mwanza Date: 25/05/2018

No.	NAME	GENDER	CELL
1	Kingsley Banda	Male	
2	Trancfor Namwera	Male	
3	Clement Smart	Male	881607251
4	Brighton Chikhungwa	Male	
5	Yohanas Stephano	Male	
6	Stiphenia Chilumba	Male	
7	Mathews Mayika	Male	
8	Beatrice Banda	Female	
9	Amosi Wyson	Male	
10	Paul Karipinde	Male	
11	Roseby Simon	Female	
12	Promise Chamanza	Female	
13	Martha Kankhwali	female	
14	Memory Chambairah	female	
15	Teleza Teharsi	female	
16	Anastancia Steven	female	880981202
17	Felia Water	female	



Youth Group: Chiwembu Village, Mwanza



Girls only group, Chiwembu Village, Mwanza