Republic of Uganda

Ministry of Agriculture, Animal Industry and Fisheries

UGANDA MULTI-SECTORAL NUTRITION PROJECT

Environmental and Social Management Framework

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TABLE OF CONTENTS

List of Figures

Glossary of Terms

Cumulative impacts/effects: The total effects on the same aspect of the environment resulting from a number of activities or projects.

Developer/Proponent/Sponsor: the entity – person/ company/ agency -proposing to develop/implement/install a new project/sub- project or expand an existing project under the ACDP.

Direct impacts: An effect on the environment brought about directly by the ACDP projects.

Disclosure: Information availability to all stakeholders at all stages of the development of projects.

Environmental impact assessment (EIA): A comprehensive analysis of the project and its effects (positive and negative) on the environment and a description of the mitigation actions that will be carried out in order to avoid or minimize these effects.

Environment: physical, biological and social components and processes that define our surroundings.

Environmental Monitoring: The process of examining a project on a regular basis to ensure that it is in compliance with an Environmental Management Plan (EMP).

Grievance: An issue, concern, problem, or claim (perceived or actual) that an individual or community group wants a company or contractor to address or resolve.

Involuntary resettlement: The forceful loss of land resources that requires individuals, families and/or groups to move and resettle elsewhere.

Impact: A positive or negative effect that a project has on an aspect of the environment.

Indirect impact: A positive or negative effect that a project indirectly has on an aspect of the environment.

Integrated Pest Management (IPM) – Use of a variety of biological, cultural, and chemical control methods in a cohesive management scheme designed to maintain pest populations at levels below those causing economic injury.

Irrigation" is the practice of maintaining root zone moisture at levels necessary to ensure optimal growth conditions for a given crop at a particular stage of growth when soil moisture would otherwise be inadequate.

Irrigation Infrastructure comprises the physical works necessary to abstract water from its natural location to the root zone of the crop.

Lead Agency: The agency with primary responsibility for the protection of the enAvironment. For instance, the lead agency for environment matters in Uganda is Uganda Environment Management Authority (NEMA).

LD_{50} is an abbreviation for "Lethal Dose, 50%" or median lethal dose. It is the amount of the substance required (usually per body weight) to kill 50% of the test population.

Mitigation measures: The actions identified in an EIA to negate or minimize the negative environmental impact that a project may have on the environment.

Pollution: contamination altering the state of purity (e.g. chemical effluent discharge into a surface water body).

Pest Management – Any deliberative action to prevent or reduce the density or harmful effects of a pest population

Pesticide – From "pest" and "cide" (a Latin derivative meaning killer), a natural or synthetic chemical agent that kills or in some ways diminishes the action of pests. It is a general term that includes herbicides, insecticides, nematicides, fungicides, antibiotics, rodenticides, plant growth regulators, etc.

Pesticide Management – Deliberative actions to reduce the harmful effects of pesticides; includes legislation and regulations as well as safe application, storage, and disposal.

Pesticide Resistance – Genetic qualities of a pest population that enable individuals to resist the effects of certain types of pesticides that are toxic to other members of that species.

Pests – Commonly include harmful insects, mites, ticks, weeds, bacteria, fungi, rodents, birds, and others.

Project and sub-project: a set of planned activities designed to achieve specific objectives within a given area and time frame. With respect to the ACDP, Project, the terminology can be confusing. The project in World Bank terms is the ACDP project; and all proposals subject to intermediary loans are subprojects.

Project Brief: The initial submitted document to NEMA to initiate the process that will lead to the issuance of the EIA certificate of approval.

Scoping: The initial stage in an environmental assessment that determines the likely major environmental parameters that will be affected and the aspects of the project that will bring upon these effects

Screening: An initial step when a project is being considered for environmental assessment. The screening is the determination of the level of assessment that will be conducted.

Significant effect: An important impact on an aspect of the environment.

Stakeholder: Any person or group that has an interest in the project, and the environmental effects that the project may bring about.

Acronyms

ACB	Agricultural Chemicals Board
ACDP	Agriculture Cluster Development Project
ACE	Area Cooperative Enterprises
AfDB	African Development Bank
ARCC	African and Latin American Resilience to Climate Change
ASPS	Agriculture Sector Programme Support
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ATAAS	Agricultural Technology and Agribusiness Advisory Services
CARs	Community Access Roads
CBWMP	Community Based Wetlands Management Plan
CCES	Control of Crop Epidemics Section
CDO	Community Development Officer
CMSP	Cluster Multi-Stakeholder Platforms
COMESA	Common Market for Eastern and Southern Africa
CGV	Chief Government Valuer
DAO	District Agriculture Officer
DNCC	District Nutrition Coordination Committee
DRC	Democratic Republic of Congo
DPO	District Production Officer
DSIP	Development Strategy and Investment Plan
DWD	Directorate of Water Development
EAAPP	East Africa Agricultural Productivity Project
EAOPS	East African Organic Products Standards
EIA	Environmental Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FAO	Food and Agriculture Organization of the United Nations
FHH	Female Headed Household
GAL	Government Analytical Laboratory
GDP	Gross Domestic Product
GHG	Green House Gases
IDA	International Development Association
IFA	Iron Folic Acid (Food Supplements)
IPMCRSP	Integrated Pest Management Collaborative Research Support Programme
IPPC	International Plant Protection Convention
IOE	International Office of Epizootics
LD_{50}	Lethal Dose 50%
LFs	Lead Farmers
LGRC	Local Grievance Redress Committee
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MHH	Male Headed Households
MoFPED	Ministry of Finance, Planning and Economic Development
MoGLSD	Ministry of Gender, Labor and Social Development
MoH	Ministry of Health
MoTIC	Ministry of Trade, Industry and Cooperatives
masl	Meters Above Sea Level
MDG	Millennium Development Goals

MISR	Makerere Institute of Social Research
MTEF	Mid Term Expenditure Framework
MUK	Makerere University Kampala
NARP	National Agricultural Research Policy
NAPA	National Adaption Plan of Action
NDP	National Development Plan
NE	North East
NEA	National Environment Act
NEMA	National Environment Management Authority
NEMP	National Environment Management Policy
NERICA	New Rice for Africa
NGOs	Non-Government Organizations
NSCS	National Seed Certification Services
NUCAFE	National Union of Coffee Agribusiness Enterprises
NWSC	National Water Sewerage Corporation
OHS	Occupational Health and Safety
OPD	Out Patient Department
PCU	Project Coordination Unit
PFCU	Pesticide and Fertilizer Control Unit
PGs	Parent Groups
PIC	Prior Informed Consent
PMA	Plan for Modernization of Agriculture
PMP	Pest Management Plan
PDO	Project Development Objective
POPs	Persistent Organic Pollutants
PRL	Pesticide Residue Laboratory
PSNAP	Primary School Nutrition Action Plan
RPO	Rural Producer Organization
PQS	Phytosanitary Quarantine Services
SACCO	Saving and Credit Cooperative
SMC	Sound Management of Chemicals
SQSP	SAICM Quick Start Programme
ToTs	Training of Trainers
UBOS	Uganda Bureau of Standards
UCA	Uganda Census of Agriculture
UCDA	Uganda Coffee Development Authority
UMNP	Uganda Multi-sectoral Nutrition Project
UNAP	Uganda Nutrition Action Plan
UNBS	Uganda National Bureau of Standards
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCC	United Nations Framework Convention on Climate Change
UNHS	Uganda National Household Survey
URA	Uganda Revenue Authority
USAID	United States Agency for International Development
VHTs	Village Health Teams
VPC	Village Peace Committees
WB	World Bank

WFP	World Food Programme
WHH	Women Headed Households
WHO	World Health Organization
ZARDI	Zonal Agricultural Research Development Institute

EXECUTIVE SUMMARY

UGANDA MULTISECTORAL NUTRITION PROJECT – (P149286)

Project Development Objective

The Uganda Multisectoral Nutrition Project Development Objective (PDO) is to increase production and consumption of micronutrient-rich foods and utilization of community-based nutrition services in smallholder households in target areas. The project focus is on promoting short-term changes in high-impact nutrition behaviors and practices that are known to contribute to medium- and long-term stunting reduction.

Target Areas

The Uganda Multi-sectoral Nutrition Project (MNP) has been designed to be implemented in the same areas and districts where the proposed Agriculture Cluster Development Project (ACDP) will be implemented. The ACDP will be specifically implemented in the Districts of Masaka, Mpigi, Rakai, Iganga, Bugiri, Namutumba, Pallisa, Tororo, Butaleja, Kapchorwa, Bukwo, Mbale, Soroti, Serere, Amuru (including Nwoya), Gulu, Apac (including Kole), Oyam, Lira (including Dokolo), Kabarole, Kamwenge, Kasese, Kyenjojo (including Kyegwegwa), Mubende, Kibaale, Hoima, Masindi, Kiryandongo, Ntungamo, Kabale, Bushenyi, Isingiro, Nebbi, Arua (including Nyadri), and Yumbe.

However, MNP project will be implemented in 20 selected districts of ACDP that have a combined score of below 10 for highest stunting prevalence and lowest prevalence of adequate diversity from 7 agro-ecological zones: Southwest Farmland (IX), Highland Ranges (X), Northwest Savannah Grassland (III), Kyoga Plains (V), Lake Victoria Crescent (VI), Western Savannah Grassland (VII), and Pastoral Grassland (VIII). The 20 were obtained from the 41 potential Agriculture Cluster Development Project (ACDP) Districts under the 12 clusters across ten agro-ecological zones. The 41 districts were ranked based on the following: (i) High prevalence of stunting in under five children; and (ii) Low dietary diversity. The National Nutrition Steering Committee will make the district selections.

Project Components and Activities

The proposed project will support GoU efforts to improve child nutrition through nutrition interventions across multiple sectors at national and district levels yet to implement selected interventions within each respective sector emphasizing existing systems, budgets, and accountability structures in eligible districts.

Component 1: Delivery of Multi-Sectoral Nutrition Services at Primary School and Community Levels

The objective of this component is to improve nutrition functions of (i) community-based institutions; (ii) primary schools; (iii) agriculture extension mechanisms; and (iv) village health teams (VHTs) in line with UNAP and the three sector strategic plans. The activities supported are organized broadly by the lead responsible sector, although there will be overlap in activities given the cross-cutting nature of the interventions and the differing roles and capacities of each sector.

Component 2: Strengthening Capacity to Deliver Nutrition Interventions

This component will support: (i) district wide project stakeholder initial sensitization training and refresher training; (ii) consultancy services to develop necessary training materials for extension

agents, primary school and community workers including workshops to finalize training and support materials, and printing and distribution of necessary support materials for each sector; (iii) sector-specific technical training for relevant district, primary school and community personnel given by Master Trainers; and (iv) supportive supervision and nutrition monitoring at district level and below.

Component 3: **Project Management, Monitoring, Evaluation and Knowledge Generation**
This component will include initiatives to: (i) ensure project management and coordination; and (ii) support monitoring, evaluation at all levels, knowledge generation and management, and dissemination of findings within Uganda and globally. This component will finance goods, services, and specified incremental operating costs (for all components). Monitoring of activities at district level and below in each sector will be reported by that respective sector. Sectors may decide to simultaneously provide information through sectoral channels and to the district. Information must be provided to the district which will compile, consolidate and produce reports by the project Nutrition Focal point, shared with the DNCC (under supervision of the CAO) and reported to the National Project Coordination Unit in MAAIF.

Key Project Activities with Environmental Safeguards Implications
The salient physical project activities relevant to safeguard analysis apply to Component 1 which involves establishment and operation of demonstration gardens both in selected progressive farmer homes and at primary schools. However, though these demonstration gardens are expected to be limited in size to half acre per selected school or homestead, they may involve use of fertilizers and pesticides which may generate some environmental, health, safety and social issues. These impacts are expected to be minimal and not adverse, site specific and readily manageable. Schools that will be selected to host the demonstration gardens shall be chosen after confirming availability of at least one half acre of available arable land within the school boundaries and therefore there will be no land acquisition. The respective District Agricultural Extension services shall be rendered to the schools and selected farmers to provide guidance for the management of the demonstration gardens.

Project Financing
A Global Agriculture and Food Security Program (GAFSP) grant of US$27.64 million will finance all project interventions. Project implementation period is five years, from 2015 to 2019. The budget will assume a base cost for contingencies of 10 percent to reflect variations in base cost estimates for goods and services in terms of quantities and/or methods of implementation. During Project appraisal, agreement will be reached on the content of each component, amounts allocated to the components, building on the detailed costing which has been conducted and further detailed costing of interventions and GoU selection of the districts.

THE ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

Purpose and Scope
Since ACDP and MNP will be implemented in the same Districts, with MNP covering 20 Districts that will be selected from the 41 ACDP Districts, it was deemed appropriate to adapt the ACDP ESMF to guide implementation of MNP as well. In addition, under Component 1 of ACDP, the project will support procurement and use of agricultural inputs which include pesticides, fertilizers, and other agro-chemicals. This very much ties with Components 1 of MNP which may involve use of pesticides in school demonstration gardens and selected farmer groups/homes. Based on this background and understanding, the ACDP ESMF was deemed applicable to MNP and thus its adaption for use by MNP. The ESMF provides guidance on how environmental and social aspects of MNP shall be identified, assessed and managed. Specific locations including Districts, Schools, and

Link Farmers have not been identified at this stage; hence it provides a framework to assist project implementers to screen the projects at planning stage and institute measures to address adverse environmental and social impacts during implementation. The major safeguards focus in MNP will be on the use and management of pesticides and agricultural chemicals at the selected farmers and schools gardens. This ESMF has therefore been revised as appropriate to largely cater for this focus/purpose.

Preparation of ESMF

The ACDP ESMF has been adapted for MNP and was prepared in accordance with applicable World Bank safeguard policies and Uganda environmental impact assessment guidelines, which involved data literature reviews; field reconnaissance studies, public consultations and discussions with relevant sector institutions, including districts, private sector, statutory agencies, local communities and primary schools in Kasese and Namutumba Districts.

KEY ECONOMIC AND LIVELIHOOD ACTIVITIES IN PROJECT AREA

Agriculture is the main economic activity in the proposed MNP areas with a bias towards food crops such as beans, sorghum, millet, maize, cassava, sweet potatoes, Irish potatoes, ground-nuts, bananas; cash crops such as coffee; fruits and vegetables, such as passion fruits, tomatoes, onions, pineapples and cabbage in addition to cattle keeping.

POLICY FRAMEWORK

Under the project the following applicable policies have been reviewed:

a. The National Environment Management Policy 1994 (NEMP);
b. The National Development Plan 2010-2015;
c. The Uganda Vision 2040;
d. Agricultural Sector Development Strategy and Investment Plan 2010/11-2014/15;
e. The 2003 National Agricultural Research Policy;
f. Draft Uganda Organic Agriculture Policy, July 2009;
g. Water Resources Policy, 1995;
h. Plan for Modernization of Agriculture (PMA);
i. The National Gender Policy, 1997;
j. The National HIV/AIDS Policy, 2004;

The Legal Framework

The applicable legal instruments to the MNP project include:

a. Constitution of the Republic of Uganda, 1995
b. The National Environment Act, Cap 153
c. The Agricultural Chemicals (Control) Act, No. 1 of 2006
d. The Occupational Safety and Health Act, 2006
e. Control of manufacture, etc. of agricultural chemicals Act Cap 29
f. The National Agricultural Advisory Services Act, 2001
g. The Agricultural Seeds and Plants Act (Cap 28)
h. Environmental Impacts Assessment Regulations, 1998
i. National Environment (Waste Management) Regulations, 1999
j. The Local Governments Act (Cap 243)

k. Land Act, Cap 227
l. The Public Health Act, 1964
m. Uganda National Bureau of Standards Act, Cap 327
n. The Workers Compensation Act, Cap 225

Related International Conventions and Agreements

a. The Basel Convention on the Control of Trans-boundary Movement of Hazardous Wastes and Their Disposal 1989;
b. Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and pesticides in International Trade, 2004;
c. The International Maritime Dangerous Goods (IMDG) Code;
d. Strategic Approach to International Chemicals Management (SAICM);
e. IFC EHS Guidelines for Pesticide Manufacturing, Formulation, and Packaging;
f. FAO Guidelines on Good Practice for Ground Application of Pesticides, 2001

World Bank Safeguard Policies

The Project has been assigned Environmental Category B. The Project triggers Environmental Assessment (OP 4.01), and Pest Management (OP 4.09).

POTENTIAL PROJECT IMPACTS AND MITIGATION MEASURES

Positive Impacts

MNP will have the following benefits:

i. School gardens can be an effective platform for community engagement and social change. Project experience indicates that engagement of parents is important to build the linkage between schools and parents. The use of media, particularly radio, is an important part of demand generation.
ii. Increasing agricultural production (e.g. increasing commercialization of agricultural outputs) may improve incomes but is not effective at improving nutrition outcomes. There are still major gaps in production and consumption of dietary diverse foods, and other key nutrition behaviors, and these require interventions beyond the agricultural sector.
iii. Focused interventions are more effective directed at an appropriate age range ("first 1000 days"), or in promotion of micronutrient-rich foods; other nutrition projects have found that focusing on year round production of fruits and vegetables in backyard/kitchen gardens is an effective approach to improving dietary diversity. Focusing on a limited number of specified crops allows consistent messaging from all communication channels; this should be based upon rapid assessment of regional differences in under nutrition determinants and appropriate and locally available crops to ensure approaches are contextually appropriate.
iv. Large-scale participatory community planning, continuous engagement and support, can increase the impact and sustainability of the grassroots development process. In sum, multi-sectoral approaches implemented at the community and primary school level have the potential to maximize the impact and the sustainability of the interventions on young children.

Negative Impacts

The likely negative environmental impacts of MNP are limited and mainly arise from the establishment and operation of demonstration gardens at selected schools and lead farmers premises where application and use of pesticides and fertilizers may be undertaken. When not properly applied

and handled, pesticides may lead to pollution of water sources, health impacts because of poor safety measures, and so on. A pest management plan as part of the ESMF has been prepared to address potential related issues.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The MNP will have several positive social impacts for people. MNP is expected to have significant positive impact on social and poverty conditions by increasing productivity and production of the selected commodities as well as focusing to reach and promote smallholding farmers. MNP will promote better nutritional practices among the communities and greatly improve the general health status and wellbeing of the local populace, in the long run. The process has been designed to ensure the inclusion of women and youth in the management of farms (and/or agribusiness) enterprises.

The MNP Project has been assigned Environmental Category B. Some of the negative environmental and social impacts of MNP relate to the use of pesticides. Most of these impacts are minor or of low-intensity, site-specific and thus relatively straight forward to manage, with participation of the Local Governments, to ensure proper handling, application of pesticides, including disposal of pesticides containers.

Recommendations

Development of guidelines for pesticides use and management – Need to develop as part of the Projects Operational Manual guidelines for use and disposal of pesticides is highly recommended. This will provide quick reference and guidance to the project implementers and beneficiaries on how to purchase, transport, use and apply, safely dispose of pesticides.

1 INTRODUCTION

1.1 Uganda Multi-sectoral Nutrition Project (P149286)

This section provides a brief description of the proposed Uganda Multi-sectoral Nutrition Project (MNP), covering its objectives, target areas, project activities, and financing.

1.1.1 Project Development Objective

The Project Development Objective (PDO) is to increase production and consumption of micronutrient-rich foods and utilization of community-based nutrition services in smallholder households in project areas. The project focus is on promoting short-term changes in high-impact nutrition behaviors and practices that are known to contribute to medium- and long-term stunting reduction.

1.1.2 Target Areas

The Uganda Multi-sectoral Nutrition Project (MNP) has been designed to be implemented in the same areas and districts where the Agriculture Cluster Development Project (ACDP) will be implemented. The ACDP will be specifically implemented in the Districts of Masaka, Mpigi, Rakai, Iganga, Bugiri, Namutumba, Pallisa, Tororo, Butaleja, Kapchorwa, Bukwo, Mbale, Soroti, Serere, Amuru (including Nwoya), Gulu, Apac (including Kole), Oyam, Lira (including Dokolo), Kabarole, Kamwenge, Kasese, Kyenjojo (including Kyegwegwa), Mubende, Kibaale, Hoima, Masindi, Kiryandongo, Ntungamo, Kabale, Bushenyi, Isingiro, Nebbi, Arua (including Nyadri), and Yumbe.

However, MNP project will be implemented in 20 selected districts of ACDP that have a combined score of below 10 for highest stunting prevalence and lowest prevalence of adequate diversity from 7 agro-ecological zones: Southwest Farmland (IX), Highland Ranges (X), Northwest Savannah Grassland (III), Kyoga Plains (V), Lake Victoria Crescent (VI), Western Savannah Grassland (VII), and Pastoral Grassland (VIII). The 20 were obtained from the 41 potential Agriculture Cluster Development Project (ACDP) Districts under the 12 clusters across ten agro-ecological zones. The 41 districts were ranked based on the following: (i) High prevalence of stunting in under five children; and (ii) Low dietary diversity.

Within the ACDP clusters, the Project will select a limited number of districts to participate based on LG readiness for implementation, using the most recent MOLG report, "Annual Assessment of Minimum Conditions and Performance Measures for Local Governments". While most districts will have met the minimum standards, what will be important for the project is to give weight to particular performance criteria and staff functional capacity. The elements of performance measures which bear particularly on project selection are those that address staff functional capacity, including: Development planning and linkages with the district budget; budget allocation performance; procurement capacity and performance; gender mainstreaming performance; council executive and finance and planning committee performance; functionality of the LG agriculture, education, and health Directorates; functionality of Natural Resources Directorate and performance with the LoGICS monitoring system. Detailed discussions will be held prior to appraisal with the Ministry of Local

Government and Public Service to determine how to properly rank the district choices within these selections. Tentatively proposed is to consider the above categories of performance ratings for the last two available years in the above categories, and total the scores for a district to give an estimate of its project functionality. New commitments and budget planning for a district will be contributing factors. The National Nutrition Steering Committee will make the district selections.

1.1.3 Project Components and Activities

Project Components and Activities

The proposed project will support GoU efforts to improve child nutrition through nutrition interventions across multiple sectors at national and district levels yet to implement selected interventions within each respective sector emphasizing existing systems, budgets, and accountability structures in eligible districts.

Component 1: Delivery of Multi-Sectoral Nutrition Services at Primary School and Community Levels

The objective of this component is to improve nutrition functions of (i) community-based institutions; (ii) primary schools; (iii) agriculture extension mechanisms; and (iv) village health teams (VHTs) in line with UNAP and the three sector strategic plans. The activities supported are organized broadly by the lead responsible sector, although there will be overlap in activities given the cross-cutting nature of the interventions and the differing roles and capacities of each sector.

Sub-component 1.1: Community Sensitization and Establishment/Strengthening of Community-Based Institutions (Lead entity: Districts)

This sub-component will support: (i) operational costs for initial sensitization, formation, mobilization, and facilitation of Parent Groups (PGs) from the communities surrounding selected primary schools; (ii) two "lead farmers" (LF) from each PG who will coordinate mobilization and participation of the PGs in the school demonstration plots and other project activities; (iii) provision of necessary seeds and planting materials, tools, and fertilizers for the LFs to establish community-based multiplication and distribution mechanisms to increase community access to improved seeds and vines.

Sub-component 1.2: Enhancing Nutrition Services delivered through Primary Schools (Lead sector: Education)

This sub-component will support: (i) "School Nutrition Committee" establishment/strengthening to develop and implement a Primary School Nutrition Action Plan (PSNAP), including demonstration garden selection and oversight activities; (ii) nutrition education, food preparation, food safety, and hygiene practices deworming for school children and weekly iron folic acid tablets for female students 11 years or older (iii) selection and oversight .

Sub-component 1.3: Agriculture Support for School-Based Nutrition Services (Lead Sector: Agriculture)

This sub-component will support: (i) engagement of MAAIF agriculture crop extension specialists with selected primary schools in development of the PSNAP,; (ii) agricultural design and technical and procurement support for the primary school demonstration gardens; (iii) technical and procurement support to Lead Farmers and communities in expanding production of promoted crops; (iv) and delivery of a pre-developed curriculum based on the UNAP priorities.

Sub-Component 1.4: Strengthened Nutrition Services through Village Health Teams (VHTs) (Lead Sector: Health)

This sub-component will support: (i) engagement of MOH specialists with selected primary schools in development of the PSNAP; (ii)MOH/VHT focus on nutrition behavior communications, monthly community-based growth monitoring and promotion of children under 23 months; (ii) MOH/VHT provision of IFA supplements for pregnant/lactating women, deworming during pregnancy, and zinc supplements for children 6-59 months; (iii) MOH/VHT coordination of MOH nutrition policies in communities; (iv) MOH promotion of the use of nutrition related health services and improved practices; (v) curriculum development and regular MOH primary school nutrition education sessions for students (and PG demonstrations) will be included in the PSNAP and necessary inputs can be procured by the School Nutrition Committee.

Component 2: Strengthening Capacity to Deliver Nutrition Interventions

This component will support: (i) district wide project stakeholder initial sensitization training and refresher training; (ii) consultancy services to develop necessary training materials for extension agents, primary school and community workers including workshops to finalize training and support materials, and printing and distribution of necessary support materials for each sector; (iii) sector-specific technical training for relevant district, primary school and community personnel given by Master Trainers; and (iv) supportive supervision and nutrition monitoring at district level and below.

Component 3: **Project Management, Monitoring, Evaluation and Knowledge Generation**

This component will include initiatives to: (i) ensure project management and coordination; and (ii) support monitoring, evaluation at all levels, knowledge generation and management, and dissemination of findings within Uganda and globally. This component will finance goods, services, and specified incremental operating costs (for all components). Monitoring of activities at district level and below in each sector will be reported by that respective sector. Sectors may decide to simultaneously provide information through sectoral channels and to the district. Information must be provided to the district which will compile, consolidate and produce reports by the project Nutrition Focal point, shared with the DNCC (under supervision of the CAO) and reported to the National Project Coordination Unit in MAAIF.

Sub-component 3.1: Project management and coordination

This sub-component will support: (i) project-related implementation capacity, including support for the designated project coordinator and key additional staff needed in areas such as fiduciary and M&E specialists who make up the Project Coordination Unit (housed within MAAIF); (ii) additional activities and related expenditures for central ministries not currently readily handled by their procurement and financial management systems, including management information systems, as well as auditing, and reporting; (iii) strengthening district and sub-entities fiduciary management and service delivery contracting capabilities, including staff training, as well as supplemental operational funds to carry out explicit project-related mandates. The institutional capacities of MAAIF, MOES, and MOH, as well as of participating districts, will be supported to enhance coordination, project management, and technical capacity to deliver this project.

Sub-component 3.2: Project monitoring, evaluation, and knowledge generation:
This sub-component will support: (i) active strategic planning and cross-coordination of project activities, execution and adjustments by agriculture, health and education sectors; (ii) development and implementation of a consolidated project system for regular project activity and fiduciary monitoring and reporting; (iii) surveys to provide baseline, midline and end line values, ultimately for impact evaluation purposes; and (iv) policy analysis and operational research.

1.1.4 Key Project Activities

Key Project Activities

The salient physical project activities relevant to safeguard analysis apply to Component 1, which involves establishment and operation of demonstration gardens both in selected progressive farmer homes and at primary schools. However, though these demonstration gardens are expected to be limited in size to half acre per selected school or homestead, they may involve use of fertilizers and pesticides which may generate some environmental, health, safety and social issues. These impacts are expected to be minimal and not adverse, site specific and readily manageable. Schools that will be selected to host the demonstration gardens shall be chosen after confirming availability of at least one half acre of available arable land within the school boundaries and therefore there will be no land acquisition. The respective District Agricultural Extension services shall be rendered to the schools and selected farmers to provide guidance for the management of the demonstration gardens.

1.1.5 Project Financing

A Global Agriculture and Food Security Program (GAFSP) grant of US$27.64 million will finance all project interventions. Project implementation period is five years, from 2015 to 2019. The budget will assume a base cost for contingencies of 10 percent to reflect variations in base cost estimates for goods and services in terms of quantities and/or methods of implementation.

During Project appraisal, agreement will be reached on the content of each component, amounts allocated to the components, building on the detailed costing which has been conducted and further detailed costing of interventions and GoU selection of the districts. Initial and very preliminary estimates are that the largest component is expected to be Component 1, Delivery of Multi-sectoral Community-based Nutrition Services (estimated US$18.0 million); followed by Component 2, Capacity building (estimated US$ 6.0 million); with the smallest allocation to Component 3 Program Management and Knowledge Generation (estimated US$ 3.64 million).

1.2 Purpose of ESMF

This ESMF was originally prepared by MAAIF for ACDP. Since ACDP and MNP will be implemented in the same Districts, with MNP covering 20 Districts that will be selected from the 41 ACDP Districts, it was deemed appropriate to adapt the ACDP ESMF to guide implementation of MNP as well. In addition, under Component 1 of ACDP, the project will support procurement and use of agricultural inputs which include pesticides, fertilizers, and other agro-chemicals. This very much ties with Components 1 of MNP which may involve use of pesticides in school demonstration gardens and selected farmer groups/homes. Based on this background and understanding, the ACDP ESMF was deemed applicable to MNP and thus its adaption for use by MNP. The ESMF provides

guidance on how environmental and social aspects shall be identified, assessed and managed. Specific project locations for MNP including districts, schools and farmer groups/households have not been identified at this stage; hence the ESMF provides a general impact identification framework to assist project implementers to screen the projects during identification and institute measures to address any negative environmental and social impacts during implementation.

1.3 Objectives

The objectives of the ESMF are:

a. Establish clear procedures and methodologies for environmental and social planning, review, approval and implementation of sub-projects;
b. Prescribe project arrangements for the preparation and implementation of sub-projects in order to adequately address World Bank safeguard issues;
c. Assess the potential generic environmental and social impacts of envisaged investments in the projects;
d. Propose generic mitigation measures which will effectively address identified negative impacts;
e. Specify appropriate roles and responsibilities, and outline the necessary reporting procedures for managing and monitoring environmental and social concerns related to subprojects;
f. Determine any capacity building and technical assistance that could be needed to successfully implement the provisions of the ESMF in the institutions that have a role in the implementation of the ESMF; and
g. Establish the funding requirements to implement the ESMF.

1.4 Approach and Study Methodology in ESMF Preparation

1.4.1 Document Review

Review of the existing baseline information and literature material was undertaken to gain an in-depth understanding of the proposed project. A desk review of the Ugandan legal framework and policies was also conducted in order to internalize the pertinent national legislation and policy framework that should be considered during project implementation. Among the key documents that were reviewed in order to collect baseline information included:

a. Agricultural Sector Development Strategy and Investment Plan 2010/11-2014/15;
b. Draft MNP Project Appraisal Document 2014;
c. Draft ACDP Project Appraisal Document 2014;
d. Draft Uganda Organic Agriculture Policy, 2009
e. Land Use Policy, 2006
f. Pest Management Plans for Ghana Commercial Agricultural Project 2011;
g. FAO/NARO Country Report on the State of Plant Genetic Resources For Food and Agriculture, 2013, Entebbe;
h. ESMF for Regional Pastoral Livelihoods Resilience Project, MAAIF 2013;
i. ESMF for Agricultural Technology and Advisory Services (ATAAS) Project, MAAIF-2009;
j. District Environment Reports;
k. Ministry of Water and Environment/Directorate of Water Resources Management, Hydro climatic report 2000;
l. National Development Plan 2010/11– 2014/15;
m. Plan for Modernization of Agriculture, 2000
n. Sector Annual Review Reports for MAAIF 2010-13 periods;

o. UBOS, 2010 Uganda Census of Agriculture 2008/2009;
p. Uganda Vision 2040; and
q. Uganda Bureau of Statistics Statistical Abstract 2011.

Literature and documentation also included cataloguing and analyzing customary rights and practice on water resource use and management were identified and reviewed. These were sourced at the sub-county, local district administration, area operational NGOs, line ministry and client field staff and headquarters.

1.4.2 Reconnaissance Field Visit

A sample of the proposed cluster districts were visited and surveyed through deliberate inspection of their respective characteristic features i.e. the environmental and social setup. This was done with a view of assessing the values that are likely to be affected. The survey findings informed the assignment in terms of categorization and possible subprojects anticipated as well as pertinent environmental and social impacts in the various phases of the subprojects which is important in terms of the development of screening procedures and checklists.

1.4.3 Stakeholder Consultations

Consistent with best practice in developing ESMFs, consultations were held during field visits with the key stakeholders and institutions including: MAAIF, NAADS, NARO, MUK, UNBS, URA, NEMA, Uganda Coffee Development Authority, Local Government Officials in Namutumba and Kasese Districts. This was to ensure that the project design and ESMF addressed existing challenges as captured on the ground. Dialogue and interviews were also held with a sample of smallholder farmers in the different cluster districts to capture the existing pest and pesticides management methods and well as to collect data on the magnitude of pest problems in the country.

2 PROJECT BASELINE DESCRIPTION

2.1 Size and Location

Uganda is a land locked country, located in East Africa, lying between latitude 40 12' N and 10 29' S and longitude 290 34' E and 350 E astride the equator. It is bordered by South Sudan to the North, the Democratic Republic of the Congo (DRC) to the west, Tanzania and Rwanda to the South and Kenya to the East. Its total land area is 236,000 km2 of which, 33,926 km2 is permanent water and 7,674 km2 is permanent swamp, its dry land accounts for 194,000 km2. Administratively, Uganda is divided into 112 districts and the capital city Kampala. The districts can loosely be classified into four broad regions namely; northern, central, eastern and western (Figure 31).

Figure 1: Regions of Uganda (Source: MoES, ESMF 2013)

2.2 Topography

Towards the South, the characteristic scenery consists of flat topped masa-like hills and broad valleys frequently containing swamps. Towards the North, the landscape consists of gently rolling open

plains interrupted by occasional hills, mountains and inselbergs. Most of the country lies within altitude 900–1,500m above sea level. The lowest point in Uganda is at Nimule on the Sudan border in North Western part of the country, where the altitude is 600 m.a.s.l and the highest point is Mt Rwenzori whose highest pick is 5 100 m.a.s.l.

2.3 Climate

Over most of the country, mean annual maximum temperatures range between 18-35^{0}C; and mean annual minimum temperature range between 80-23^{0}C. Relative humidity is often high, ranging from 70% to 100%. Mean monthly evaporation rates range between 125-200mm. Most parts of the country have two rainy seasons, April-May and October-November with the exception of north eastern region which has one main season. The wettest part of the country is Lake Victoria shores, and the mountain uplands of the East and Western parts of the country where the mean annual rainfall varies between 1,200-1,500 mm. The driest part of the country is the NE part, inhabited by the semi-nomadic Karamajong tribe. Here, the mean annual rainfall varies between 625-1,000 mm. The rainfall in almost all parts of the country adequately supports agriculture and soil types range from fertile volcanic ash, sandy gravel acidic or shallow poor soils.

2.4 Geology and Soils

Geological formations of Uganda reveal very old rocks formed in the pre-Cambrian era around 300 or 600 million years ago. The younger rocks are either sediments or of volcanic origin, formed from about 135 million years ago (cretaceous period) to the present. Thus, a gap of about 460 million years remains in the knowledge of the geological history of Uganda. A number of parameters define the soils of Uganda and these include parent rock, and the age of soil and climate. The most dominant soil type in ferralistic soil, which accounts for about two-thirds of the soils found in the country. Based on studies carried out in the past (NEMA 1996), Uganda's soils are divided into six categories according to productivity: (a) very high to high productivity, (b) moderate productivity, (c) fair productivity, (e) low productivity (e) negligible productivity and (f) zero productivity. The high productivity soils cover only 8% of the area of Uganda (MoWE, 2001).

2.5 Socio-Economic Environment

The MNP will be specifically implemented in twenty districts selected from the following ACDP districts of Masaka, Mpigi, Rakai, Iganga, Bugiri, Namutumba, Pallisa, Tororo, Butaleja, Kapchorwa, Bukwo, Mbale, Soroti, Serere, Amuru (including Nwoya), Gulu, Apac (including Kole), Oyam, Lira (including Dokolo), Kabarole, Kamwenge, Kasese, Kyenjojo (including Kyegwegwa), Mubende, Kibaale, Hoima, Masindi, Kiryandongo, Ntungamo, Kabale, Bushenyi, Isingiro, Nebbi, Arua (including Nyadri), and Yumbe. Their socio-economic profiles are summarized below:

Soroti District - Like most other districts in Uganda, agriculture remains the main economic activity in the area with emphasis on food crops and cotton as the main cash crop. Finger millet, sorghum, ground-nuts, cassava, cowpeas, sweet potatoes, maize, soy beans, simsim (sesame) and sunflower form the main source of food for households, while fruits (such as passion fruits, oranges and mangoes) and vegetables such as tomatoes, onions and cabbages are also grown in the district whose population estimates stand at 445,800 people, with 228,000 female, 217,800 male.

Apac District - The District is bordered by Oyam District in the North,Kole in the North-East, Lira in the East, Masindi District in the West, Amolatar and Nakasongola Districts in the South. The District covers a total area of 2,847 square kilometres of which 9% is under open swamps and water while 15% is under forest with 2,970 square kilometres for human settlement and 2,524 square kilometres suitable for arable farming. Crops production is the major economic activity in Apac, employing

about 80% of the population. Arable land is very fertile and makes up 57.88% of the total land area. According to the 5 Years District Development Plan (FY 2010/11 to 2014/2015), the basic type of farm management system is the family farm, with an average land holding of 2+ hectares. Labour for cultivation is provided by the family and traditional communal labour provided by the local population on rational basis. A wide variety of tropical, sub-tropical and some temperate crops are produced in the area. The main types of crops produced are food crops (Millet, Maize, Sorghum, Cassava, Peas, Beans, and traditional vegetables). Cash crops include: - Cotton, tobacco, legumes and non-traditional cash crops such as simsim, rice, sunflower, and soya beans.

The farming system in Apac District is not yet developed. Farmers still practice poor methods of opening land by use of hand hoes; small plots are overused due to lack of land for commercial farming, there is declining soil fertility, soil erosion and drought are common. Farmers use local planting and breeding materials, partly due to illiteracy, poverty, tradition and culture. The proportion of families using ox-ploughs is 50%, cultivation unit is usually the household members though communal groups of neighboring households are also common. Use of tractors for cultivation is almost non-existent.

Iganga District – It borders Mayuge district to the south, Bugiri to the southeast, Kaliro and Namutumba to the North and Jinja District to the West. It covers a total area of 1680 square kilometers, much of which is land and swamps. Iganga is basically a rural district (91% of the district population) with over 80 % of the people engaging in peasant agriculture, animal husbandry, fishing and produce buying. The main crop grown for cash is maize though in some parts the striga weed has affected its production. Other crops include coffee, potatoes, rice, beans and cassava. Coffee and sugar canes are the main traditional cash crops. Majority of the people live below the poverty line i.e. on less that $1 a day and can only produce for home consumption.

Isingiro District - Formerly part of Mbarara district, Isingiro borders the districts of Rakai in the East, Kiruhura and Mbarara in the North, Ntungamo in the West and the United Republic of Tanzania in the South. With a total population of 350,100 people(180,700 female, 169,400 males), the district covers an area of 2657.18 Sq. Km. In terms of climate, relief and vegetation, the district has a hilly terrain with vegetation characterized by a combination of bush and short grass which is suitable for animal rearing. The area receives rainfall of about 957mm annually, which support crop and animal production. In addition, the district has a high potential in terms of mining and lumbering.

Rakai District –With an area of 4,908.5km^2. Rakai borders the districts of Lyantonde and Masaka in the North and North-East, Mbarara in the West, Lake Victoria in the East and the United Republic of Tanzania in the south. The district lies in a modified equatorial climatic zone with high temperatures and heavy rainfall almost all year round. Based on population projections, there are 433,561 people in Rakai district. Agriculture is the main economic activities with a bias towards food crops such as beans, sorghum, millet, maize, cassava, sweet potatoes, Irish potatoes, ground-nuts, bananas; cash crops such as coffee; fruits and vegetables such as passion fruits, tomatoes, onions, pineapples and cabbage in addition to cattle keeping.

Kasese District – The district is divided into two counties, Bukonzo and Busongora, and is made up of 28 lower local governments. These include one municipal council split into three divisions, 3 town councils and 22 sub counties. The population of Kasese District is concentrated in a narrow corridor of land running between the Rwenzori Mountains and the Western Rift Valley. Considerable pressure is placed on the available land to sustain the current growing population, and also on restricted land to be opened up for future use.

Trade is the main engagement in the urban centers of Kasese, further bolstered by cross border commerce with the Democratic Republic of Congo especially in the border LLG of Mpondwe hubiriha. A relatively new economic driver, on a positive growth trend, is the cultivation of maize, passion fruit, mangoes and pineapples, the latter two crops on a commercial scale.

Kabale District – Kabale district is predominantly occupied by the Bakiga. However there are a few other ethnic groups also found in the district. These are mainly the Banyarwanda and Bafumbira. The district is one of the most densely populated in Uganda only exceeded by the Kisoro District. Agriculture and agricultural related activities are the main occupation of the district. It is estimated that over 90% of the population is engaged in agriculture. The available land for agriculture is estimated to be 1,695km^2, while the area under agriculture is estimated to be 1,186km^2. The average farm size is 0.5 hectare. The bulk of the crops grown are the traditional food crops that include: sorghum, Irish potatoes, sweet potatoes, wheat, beans, vegetables, maize, peas, finger millet, and coffee among others.

Dokolo District – Dokolo District is located approximately 180 km to the north of Kampala with the District administrative headquarters located in Dokolo Town. It is bordered by Lira and Alebtong Districts to the north, Apac and Amolatar to the west and Kaberamaido District to the South-East. The District has an area of 1,072km^2. In 2002 the District had a population of 129,385 which is projected to rise to an estimated 171,000 by 2010 (UBOS projection from the 2002 census).The District comprises a single County (Dokolo) and five Sub-Counties, Agwatta, Batta, Dokolo, Kangai and Kwera.

Lira District – According to the 5 Years District Development Plan (FY 2010/11 to 2014/2015), the economy of the district is mainly based on agriculture, with 81% of the population engaged in subsistence farming. Other sector in economy includes agro processing industries (3.1%), commercial activities and banking (15.9%). At independence cotton was the major cash crop but its production has declined and has lost glory. Crops hitherto were mainly food crops such as millet, simsim, cassava, Groundnut, beans, pigeon peas, cowpeas, sorghum, sweet potatoes and other recently introduced crops such as rice, sunflower, soya beans, maize and horticultural crops serve both as food and cash crops.
Crop production plays a very important role in the agricultural development in particular and more general in the development of Lira District. Crop agriculture provides food, cash income, employment and raw materials for rural and urban industrialization. It has greatly contributed to the economic growth and development witnessed in Lira in the recent past. Crop production is by smallholder peasant farmers who rely on rain fed agriculture. Apart from OSRIP farms in Itek –Okile, (Barr/Amach sub counties respectively) there are no large screens and untargeted farms in the district. There are many potential areas along wetlands and dams where small scale irrigation can be developed.

Both men and women participate in crop production, but the role of women is much greater than that of men, especially in weeding, processing and storage. Unfortunately very often women hardly take part in the decision-making process at the household level which is an area which is almost entirely controlled by men. Through gender mainstreaming it is, however, possible to increase production and productivity and guide farmers better to make profit, reduces crop losses in the field and post-harvest.

NAADS was launched in greater Lira in FY 2002/2003 in five sub counties. Greater Lira then comprised of Lira, Amolatar, Dokolo, Alebtong and Otuke districts. In the last four years, NAADS

has expanded to cover all the 24 sub counties in the entire greater Lira. In the first 2 years 7 sub counties were brought on board. In 2005/2006- Amolatar was granted a district status and Lira lost 4 sub counties (Aputi, Awelo, Muntu, and Namasale), in 2006/2007, Dokolo county was curved out from Lira and Lira remained with 15 sub counties (Abako, Adwari, Adekokwok, Aloi, Amach, Amugu, Apala, Aromo, Barr, Lira, Ogur, Okwang, Olilim, Omoro, and Orum). 2008/2009 and 2009/2010 otuke (Orum, Okwang, Olilim and adware sub counties) and Alebtong (Apala, Abako, Amugu, Aloi and Omoro sub counties) were curved out of lira district.

Currently, NAADS has covered all the sub counties in Lira district. The sub counties are: - Agweng, Adekokwok, Amach, Aromo, Barr, Lira, Ogur and Omoro are 9-year old sub counties; Adekokwok 7-year old, while the sub counties of Barr, Lira are 5 years old. New sub counties that were brought on board in the FY 2008/2009 were Adyel., Ojwina, Railways and Central Divisions. The sub counties of Agali and Ngetta are newly created 2009/10 and will be operated.
Orientation and Stakeholders education: - NAADS has educated the stakeholders (district councilors, farmers, private sector and technical staff) on the NAADS programme objectives, principles and programme implementation. Most stakeholders are aware of the NAADS programme. The programme educated stakeholders in the new sub counties.

NAADS institutional structures are in place, that is, the farmer groups, farmer fora, lower local governments as well as the district local government. The capacity of the institutions (PCCs, CBFs, and FGs) to handle the programme and the level of awareness have greatly improved. 892 farmer groups have registered and have been empowered to manage NAADS. The interim farmer fora, executive farmer fora and procurement committee are in place.

2.6 Division of Labour

2.6.1 General Trends

Predominantly male tasks in agriculture include the felling of trees, ploughing with oxen or tractors, digging holes, the purchase and use of chemicals, looking for markets and the sale of produce. Women usually undertake sowing, harvesting, head loading of produce, crop-drying, winnowing, seed selection, pig and poultry-rearing and bartering sunflower seeds for oil. Other tasks, such as weeding, bagging and crop storage, are almost equally undertaken by both women and men. It is estimated that women do 85% of the planting, 85% of the weeding, 55% of land preparation and 98% of all food processing.
However, decisions to market are mainly made by men (70%), or are made jointly (15%). In rural areas, it is estimated that women's workloads both in the agriculture sector and household considerably exceed those of men. Traditionally, men tend to be responsible for the cash crops, but male labour is usually withdrawn if those crops decrease in profitability. This happened with many crops in the seventies and eighties, when producer prices were unfavorable. When market conditions change, attracting male labour back to such crops may be difficult. In most districts, the MHHs act as employers within the agriculture sector while WHHS are largely employees.

The design of MNP has been and continues to be as inclusive to the extent possible based on the consultative and participatory process for the Agriculture Sector Development Strategy and Investment Plan from which this project draws its nutrition sensitive agricultural activities and target groups that includes women and children. Similarly, several priority gender issues related to the improvement and diversification of household food production of smallholder farmers an area controlled by women through increased access to agricultural inputs, extension services and promoting of labor saving technologies as identified by the consultative process are proposed. The

project will generate gender disaggregated data to the extent feasible to provide for the monitoring of the results indicators.

2.7 Land Issues in MNP Project Areas

Land tenure refers to the manner in which land is owned, occupied, used and disposed of within a community. No doubt land is the most important and the only reliable physical and economic resource for everybody, especially in predominantly agricultural communities. A properly defined and managed land tenure system is essential to ensure balanced and sustainable development. Under MNP Schools that will be selected to host the demonstration gardens shall be chosen after confirming availability of at least one half acre of available arable land within the school boundaries and therefore there will be no need for land acquisition.

2.8 Crop Pest and Disease Problems in Uganda

Food and cash crops in Uganda are constantly threatened by epidemic pests and diseases and weeds. Both foreign and indigenous pests, weeds and diseases are a threat to the country's agricultural sector. Climate change, modern means of travel, trade liberalization, and agricultural intensification could trigger the occurrence of new pest problems. Future outbreaks of existing or new pests, weeds and diseases are a certainty, and although all outbreaks will result in losses, the key risk is that badly and ineffectively managed responses to new outbreaks in the country will significantly raise the scale and impact of the losses. With the onset of climate change, which has extended warm temperatures to new regions, Uganda is bound to see pest-related problems spread to even wider areas since warmer temperatures due to climate change are expected to both encourage the spread of pests into new areas as well as render some plants more susceptible to their effects. The key pests and diseases are summarized below:

Crop	Key Pests	Key Diseases
Coffee	Coffee Twig Borer, Coffee Meal bug, and the Berry Borer	Coffee Wilt Disease and Coffee Leaf Rust Disease (Fungus).
Maize	Stalk Borer, Armyworm and Maize Weevil	Maize streak disease, Maize lethal necrosis, Grey leaf spot, and Maize smut.
Beans	Cutworms and Aphids	Bean Root Rot (fungal), Bean anthracnose, Bean wilt, and the Bean Rosette, Bean common mosaic (viral),
Rice	Quelea Quelea birds, Termites, Aphids, Rice Stem Borers	Rice Yellow Mottle Virus (RYMV), Rice Bright and Rice Blast
Cassava	Mealy Bug, Cassava White Fly	Cassava Mozaic and the Cassava Brown Streak Diseases

Economic Losses due to Pests and Diseases

Average crops losses, due to pests, diseases, and weeds in Uganda are estimated at 10-20% during the pre-harvest period and 20-30% during the post-harvest period. At times, losses up to 90% occur; caused by epidemics or diseases in perishable horticultural crops. The economic costs associated with a biological problem such as crop pests and diseases comprise the direct losses from predation or competition for resources and the expenditure incurred to control the pests and diseases. The full economic (monetary) cost of crop pests and diseases in Uganda is difficult to assess because the cost varies from region to region, and also requires intensive efforts to collect the necessary values. Expenditures continually change due to factors that influence the status of a pest or disease and the current and expected importance of such pests and diseases. Much as data on losses caused by pests and diseases on specific crops is scarce, below is a sample of estimation of losses for different crops cultivated in Uganda due to pests and diseases.

Crop	Estimated Annual Loss ($ million)
Bananas	35 - 200
Coffee	8
Cotton	10
Cassava	60 - 80

2.9 Key Pests and Pesticides Management Challenges in Uganda

The key bottlenecks and challenges faced by Uganda in regard to pest management and use of pesticides are as follows:

- The Country has very few researchers and crop pest and disease specialists especially epidemiologists, crop breeders, weed scientists critical for pest and diseases control;
- Limited budget for agricultural research which hinders continuity in research as well as weak collaborative linkages of NARO with tertiary universities;
- Proliferation of illegal imports by unscrupulous private companies and the presence of unlicensed dealers who are unlikely to have the requisite knowledge to correctly inform farmers what the appropriate pesticides to use are and how to use them safely;
- No food safety routine tests conducted on the food grown under pesticide use to check on contamination;
- The proportion of farmers using recommended personal protective equipment while handling pesticides is very low and exposure to hazards is amplified given that some farmers allow their children to do the spraying;
- There is widespread re-use of pesticide containers for storing food or water for humans or livestock;
- There is an overlap or lack of clarity on the responsibilities of NEMA, UNBS, NDA, GAL, and MAAIF as regards pesticides monitoring and management, a cause for ineffective monitoring due to unclear responsibilities.

National Capacity to Monitor Pests and Pesticide Use

Pests Management - Like many developing countries, at present, Uganda has insufficient enabling legislation and resources allocated to carrying out:

- Pest Surveillance and monitoring
- Border control and inspections
- Expertise in risk assessment
- Diagnostic tools for early Pest, weed and disease detections
- Expertise in diagnosis (taxonomy)
- Data collection and access to information
- Tools for rapid response to entry, establishment and spread of pests and diseases

Pesticides Management - There is limited or no budget for chemicals management in most government ministries/agencies. Most Line Ministries have restricted themselves to policy issues without putting in place adequate structures to monitor and implement the policies they put in place. In some ministries/sectors where the technical staff is available, there is inadequate funding; weak policies; lack of a pesticides inventory and lack of equipment which has led to poor service delivery. The capacity for regulation has not kept pace with the liberalization of the pesticides market. Just as

there is no systematic testing for the impacts of pesticides on farmers, there appears to be no routine food safety tests conducted on the food available in Ugandan markets. If any, it could only be 'scattered studies'. Government extension services which can provide vital training and advice on pesticides to farmers are still inadequate to reach farmers regularly. Very little of the extension officers' time is spent on pesticides, even though the majority of the smallholder farmers use pesticides. Below is a summary of overall capacity of Uganda to handle the different pesticide risks.

Nature of Problem	Scale of Problem	Level of Concern	Ability to control problem
Public health	Local	High	Low
Drinking water contamination	Local and national	High	Low
Air Pollution	Local	Low	Low
Pollution of Inland Waterways	National	Medium	Low
Pesticide residues in food	National and Regional	Medium	Low
Occupational Health agricultural	Local	High	Low
Ground water pollution	Local	Medium	Low
Storage/Disposal of expired pesticides	National	High	Low
Soil contamination	Local	Medium	Low
Unknown pesticide importation	National	Medium	Medium
Pesticide accidents transport	Local and national	Medium	Medium

3 POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

3.1 Policy Framework

3.1.1 The National Environment Management Policy 1994 (NEMP)

The key policy objectives include the enhancement of the health and quality of life of Ugandans and promotion of long-term, sustainable socio-economic development through sound environmental and natural resource management and use; and optimizing resource use and achieving a sustainable level of resource consumption. ***With regard to MNP, aspects of Environmental Assessment have been integrated into the project with the objective of ensuring sustainability in the project***.

3.1.2 The National Development Plan 2010-2015

The National Development Plan (NDP) covers the fiscal period 2010/11 to 2014/15. It stipulates the Country's medium term strategic direction, development priorities and implementation strategies. According to the NDP, the share of agriculture in GDP was 51.1 per cent in 1988 and 33.1 per cent in 1997, declining further to 15.4 per cent in 2008. The sharp decline in the share of agriculture in GDP represents significant structural transformation in the economy. ***It is therefore recognized that, there is a compelling need to ensure that productivity growth in agriculture supports the high population growth.***

3.1.3 The Uganda Vision 2040

Uganda Vision 2040 provides development paths and strategies to operationalize Uganda's Vision statement which is "A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years" as approved by Cabinet in 2007. Agriculture is the main stay of the Ugandan economy employing 65.6 per cent (UBOS, 2010) of the labor force and contributing 21 percent to the GDP. Despite these, agricultural contribution to the GDP has been declining but remains very important to provide a basis for growth in other sectors. However, agriculture productivity of most crops has been reducing over the last decade mainly due to a number of factors

including: high costs of inputs, poor production techniques, limited extension services, over dependency on rain fed agriculture, limited markets, land tenure challenges and limited application of technology and innovation. ***MNP addresses issues of nutritional uptake through selection and promotion of cultivation of nutritious food crops using appropriate technology and innovative approaches.***

3.1.4 Agricultural Sector Development Strategy and Investment Plan 2010/11-2014/15

This is the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF's) Development Strategy and Investment Plan (DSIP) for the agriculture sector, covering the period 2010/11 to 2014/15. It is a revision of the 2005/06-2007/08 DSIP and comes at a critical juncture for agriculture in Uganda. This DSIP consolidates and harmonizes all the existing parallel policy frameworks in the agricultural sector into one coherent plan. The DSIP sets the priorities for the five year period and these will be used as a basis for defining spending plans each year under the Medium Term Expenditure Framework (MTEF). ***Some of the commitments in the DSIP are targeted interventions in MNP hence; the project is consistent with development strategy of the secto***r.

3.1.5 Plan for Modernization of Agriculture (PMA)

The Plan for the Modernization of Agriculture (PMA) has seven pillars. These include research and technology, national agricultural advisory services, agro-processing and marketing, sustainable natural resource utilization, and management and physical infrastructure. The broad strategies for achieving the PMA objectives are, among others; supporting the dissemination and adoption of productivity-enhancing technologies; and ***ensuring the coordination of the multi-sectoral interventions to remove any constraints to agricultural modernization which is consistent with MNP.***

3.1.6 The National Land Use Policy

The overall policy goal is to achieve sustainable and equitable socio-economic development through optimal land management and utilization in Uganda. ***MNP took into consideration the provisions of this policy by restricting its operations to schools and farmers who have their own land.***

3.1.7 The National Gender Policy, 1997

The government adopted a National Gender Policy of 1997, a tool to guide and direct the planning, resource allocation and implementation of development programs with a gender perspective. The adoption of the gender policy has facilitated Uganda's gender mainstreaming programs in all sectors of the economy (implying, the planned works project should equally integrate gender into the implementation of works. ***MNP has mainstreamed gender dimensions into its formulation, planning and implementation framework hence, its compliance with the National Gender Policy for Uganda.***

3.1.8 The National HIV/AIDS Policy, 2004

The policy provides the principles and a framework for a multi-sectoral response to HIV/AIDS in Ugandan's world of work. The policy applies to all current and prospective employers and workers, including applicants for work, within the public and private sectors. It also applies to all aspects of work, both formal and informal. ***MNP will mainstream HIV/AIDS interventions into its plan, programmes and activities more so in its Project Implementation Manual (PIM).***

3.2 Legal Framework

3.2.1 Constitution of the Republic of Uganda, 1995

The right to a clean and healthy environment is enshrined in Article 39 of the Constitution of Uganda, 1995. ***To ensure MNP compliance with the Constitutional obligations on sustainability, an ESMF has been prepared which outlines mechanisms for environment assessment and mitigation measures included therein.***

3.2.2 The National Environment Act, Cap 153

Section 20 of the Act makes it a legal requirement for every developer to undertake an environmental assessment for projects listed in the Third Schedule of the Act. In this case, agriculture amongst others, including large scale agriculture, use of new pesticides are some of the projects in the Third Schedule to the Act that require an ESIA to be conducted before they are implemented. ***ESMF outlines some of the salient impacts in MNP as well as mechanisms for conducting further assessments on the project sub-components.***

3.2.3 The Agricultural Chemicals (Control) Act, No. 1 of 2006

This Act was enacted to control and regulate the manufacture, storage, distribution and trade in, use, importation and exportation of agricultural chemical and other related matters. Under this Act, the requirement of packaging, labeling or advertisement of agricultural chemicals is relevant in pesticides management to prevent illegal activities related to mislabeling and mis-packaging. In addition, section 13(2) provides for the period in which the seized agricultural chemicals can be detained and the power to dispose them off. The person in whose possession the chemicals were got has to consent in writing for these chemicals to be destroyed by the Government. ***It is therefore important to put in place an effective and efficient mechanism for disposal of the seized/expired chemicals. Similarly, a Pest Management Plan has been developed as party of this ESMF to among others to guide the use of pesticides.***

3.2.4 The Occupational Safety and Health Act, 2006

The Act provides for the prevention and protection of persons at all workplaces from injuries, diseases, death and damage to property. ***The ESMF provides for provision of safety gear for workers during implementation of MNP school and selected Farmer Groups activities.***

3.2.5 Control of manufacture, etc. of agricultural chemicals Act Cap 29

The Act provides for safe manufacture, packaging, store, display, distribution agricultural chemicals. It also has provisions governing the Importation and export of agricultural chemicals. The Act in its Section provides for the establishment, constitution and operation of Agricultural Chemicals Board which has the responsibility to advise government on matters pertaining to agricultural chemicals. **The ESMF provides guidance on the use and management of pesticides in MNP**.

3.2.6 Environmental Impacts Assessment Regulations, 1998

The EIA Regulations gives a systematic EIA procedure in Uganda. It gives EIA a legal mandate, thus paving the way for an enabling environment for it to use as a tool for environmental protection. The regulation also has punitive measures of offenders. It recognizes three levels of EIA:

a. An environment impact review shall be required for small scale activities that may have significant impact;

b. Environmental impact evaluation for activities that are likely to have significant impacts; and
c. Environmental impact study for activities that will have significant impacts.

In all, issues of EIA are being addressed in the project in line with these Regulations.

3.2.7 National Environment (Waste Management) Regulations, 1999

The National Environment (Waste Management) Regulations, 1999 apply to all categories of hazardous and non-hazardous waste and to the storage and disposal of hazardous waste and its movement into and out of Uganda. The regulations promote cleaner production methods and require a facility to minimize waste generation by eliminating use of toxic raw materials; reducing toxic emissions and wastes; and recovering and reuse of waste wherever possible. ***The Regulations oblige the Developer to put in place measures for proper management of waste and of which basic guidance on handling and disposal of any waste arising from the use of pesticides has been provided in the ESMF.***

3.2.8 The Local Governments Act (Cap 243)

The Act creates a decentralized system of government based on the district as the main unit of administration. Administrative powers and functions are devolved from the central government to the local governments. The Act allocates responsibility for service delivery of a number of functions to local government councils (districts, cities, municipalities or town councils) and to lower local government councils (sub-counties / divisions). ***In conformity with this Act, the respective District Local Governments shall be involved in the implementation of MNP.***

3.2.9 Land Act, Cap 227

The Land Act vests land ownership in Uganda in the hands of Ugandans and that, whoever owns or occupies land shall manage and utilize the land in accordance with the Forest Act, Mining Act, National Environment Act, the Water Act, the Uganda Wildlife Act and any other law [section 43, Land Act]. ***The planned MNP has integrated Environmental Assessments in its ESMF in compliance with the Act provisions.***

3.2.10 The Public Health Act, 1964

Section 7 of the Act provides local authorities with administrative powers to take all lawful, necessary and reasonable practical measures for preventing the occurrence of, or for dealing with any outbreak or prevalence of any infectious, communicable or preventable disease to safeguard and promote public health; and to exercise the powers and perform the duties in respect of public health conferred or imposed by this Act or other relevant laws. ***Public health and hygiene are key in MNP with regard to waste management arising from agro-chemicals use, including use of pesticides***.

3.2.11 Uganda National Bureau of Standards Act, Cap 327

The relevant provision of this Act prohibits any person to import, distribute, sell, manufacture or have in possession for sale or distribution any commodity for which a compulsory standard specification has been declared unless such commodity conforms to the compulsory standard or unless the commodity bears a distinctive mark (section 21(1). This Act could be read together with the National Environment Act on chemical standards in developing standards for pesticides use in the country.

3.2.12 The Workers Compensation Act, Cap 225 LOU

This law provides for compensation to workers for injuries suffered in course of their employment. According to the Act, an employee is entitled to compensation for any personal injury from an accident or disease arising out of and in the course of his or her employment even if the injury or disease resulted from the negligence of the employee. Under this Act, compensation is automatic. The

compensation is to be paid by the employer whether the worker was injured as a result of his or her own negligence, mistake, omission or commission.

3.3 Related International Conventions and Agreements

3.3.1 Basel Convention

The Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal was concluded in Basel, Switzerland, on March 22, 1989, and entered into force in May 1992. Now ratified by 149 countries including 32 of the 53 African countries, the focus of this convention is to control the movement of hazardous wastes, ensure their environmentally sound management and disposal, and prevent illegal waste trafficking (UNEP, 2006). The parties to this convention recognize the serious problems posed by stockpiles of unused and unwanted chemical products which, as a result of their obsolescence, are now considered wastes. At a ministerial-level meeting held in Rabat, Morocco, in January 2001, African countries declared their intent to work with other interested parties from all sectors of civil society to rid all 53 countries of Africa of these stockpiled wastes over the next 10 years. ***Therefore, any efforts to export obsolete pesticides in MNP for disposal have to be in line with the Basel Convention.***

3.3.2 Rotterdam Convention

The Rotterdam Convention aims to promote shared responsibility and cooperative efforts among Parties in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm and to contribute to their environmentally sound use. Governments began to address the problem of toxic pesticides and other hazardous chemicals in the 1980s by establishing a voluntary Prior Informed Consent procedure (PIC). PIC required exporters trading in a list of hazardous substances to obtain the prior informed consent of importers before proceeding with the trade. The convention establishes a first line of defense by giving importing countries the tools and information they need to identify potential hazards and exclude chemicals they cannot manage safely. When a country agrees to import chemicals, the convention promotes their safe use through labeling standards, technical assistance, and other forms of support. ***MNP will observe these provisions when importing agro-chemicals.***

3.3.3 The International Maritime Dangerous Goods (IMDG) Code

The International Maritime Dangerous Goods (IMDG) Code was developed as a uniform international code for the transport of dangerous goods by sea. It covers such matters as packing, container traffic and stowage, with particular reference to the segregation of incompatible substances. The Code lays down basic principles; detailed recommendations for individual substances, materials and articles; and a number of recommendations for good operational practice, including advice on terminology, packing, labeling, storage, segregation and handling, and emergency response action. The Code has become the standard guide to all aspects of handling dangerous goods and marine pollutants in sea transport. ***The Code will ensure compliance to international law in the event that Uganda decides on sea transport for its pesticides destined for disposal***.

3.3.4 The FAO International Code of Conduct on the Distribution and Use of Pesticides

It establishes voluntary standards for public and private institutions involved in the distribution and use of pesticides. The revised version of the Code, adopted in 2002, has become the globally accepted benchmark for pesticide management and has enabled many countries to establish and strengthen their pesticide management systems. The Code sets out a vision of shared responsibility between the public and private sectors, especially the pesticide industry and government, to ensure that pesticides are used responsibly, delivering benefits through adequate pest management without significant

adverse effects on human health or the environment. ***The ESMF of MNP takes into considerations these provisions to ensure safety in the project.***

3.3.5 The Safety and Health in Agriculture Convention

The Safety and Health in Agriculture Convention (Convention 184) adopted by the conference of the International Labor Organization (ILO) addresses the protection of workers in the agricultural sector. More people work in agriculture than in any other sector, more workers are injured in agriculture than in any other sector, and pesticides are a major cause of injury and death. In addition more children work in agriculture than in any other sector and they are differently and particularly vulnerable to the toxic effects of chemicals such as pesticides. A specific section of the convention deals with the sound management of chemicals and advises governments to adopt good management practices for chemicals, to inform users adequately about the chemicals they use and to ensure that adequate mechanisms are in place to safely dispose of empty containers and waste chemicals. Application of the Convention is an important step in improving pesticide management and preventing some of the problems that arise from pesticide distribution and use in developing countries. ***These are outlined in this ESMF to guide use of pesticides in MNP.***

3.3.6 Strategic Approach to International Chemicals Management (SAICM)

Uganda UNEP/UNDP Partnership initiative for the implementation of SAICM is intended to assist the Government, through the National Environmental Management Authority (NEMA), to take up the strategic priorities of SAICM Quick Start Program (SQSP), namely: develop and strength national chemicals management institutions, plans, programs and activities to implement the Strategic Approach, building upon work conducted to implement international chemicals-related initiatives; and undertake analysis, interagency coordination, and public participation activities directed at enabling the implementation of Strategic Approach by integrating the sound management of chemicals in national development priorities and strategies. The main objectives of SAICM required to strengthen measures for sound management of chemicals (SMC) are:

a. Risk reduction: To implement comprehensive, efficient and effective risk management strategies, including risk reduction, risk elimination and pollution prevention strategies, to prevent unsafe and unnecessary exposures to chemicals.
b. Knowledge and information: ensure that knowledge and information on chemicals and chemicals management, and chemical safety is adequate, appropriate, accessible and user-friendly to enable chemicals to be dealt with safely throughout their life cycle by all actors.

The Capacity-building and technical cooperation component aims to:

a. Develop sustainable capacity-building strategies for chemicals management in developing countries and countries with economies in transition and promote cooperation between these countries.
b. Establish or strengthen partnerships and mechanisms for technical cooperation between developed countries and developing countries and countries with economies in transition.
c. Ensure access to information on capacity-building for the sound management of chemicals and enhance transparency regarding donor interests and recipient needs.

Provisions of SAICM have been taken into account in the development of MNP ESMF to ensure information, capacity building and general safe handling of agrochemicals.

3.3.7 IFC EHS Guidelines for Pesticide Manufacturing, Formulation, and Packaging

The IFC Environmental, Health and Safety (EHS) guidelines for pesticides manufacturing and formulation address the synthesis, optimization of the active ingredients, process development

(manufacturing), the formulation and packaging of pesticides from these active ingredients. According to these Guidelines, pesticide manufacturing, formulation, packaging and distribution should be conducted in compliance with applicable international standards including:

a. Stockholm Convention on Persistent Organic Pollutants (POPs), which bans or restricts the manufacture and trade of intentionally produced POPs, including some pesticides;
b. World Health Organization (WHO) Recommended Classification of Pesticides by Hazard, which lists active ingredients considered to be obsolete or discontinued for use as pesticides;
c. Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade;
d. Food and Agriculture Organization's International Code of Conduct, which includes requirements on the application of the life-cycle concept in the production, management, packaging, labeling, distribution, handling, application, use, and control, including post registration activities and disposal of all types of pesticides, including used pesticide containers; and
e. Food and Agriculture Organization's Revised Guidelines on Good Labeling Practice for Pesticides.

In MNP, aspects of pesticides and related considerations are addressed by having in place, a Pest Management Plan as part and parcel of the project ESMF, including guiding instructions that will be incorporated in the Project Operational/Implementation Manual.

3.3.8 FAO Guidelines on Good Practice for Ground Application of Pesticides, 2001

In 2001, FAO produced a new, revised and expanded series of pesticide application equipment-related guidelines to cover the application of pesticides using any ground based field crop sprayers, including operator carried and tree and bush crop sprayers. Other related guidelines by FAO include:

- Guidelines on good practice for aerial application of pesticides;
  Guidelines on minimum requirements for agricultural pesticide application equipment;
- Guidelines on standards for agricultural pesticide sprayers and related test procedures;
- Guidelines on procedures for the registration, certification and testing of new pesticide application equipment;
- Guidelines on the organization of schemes for testing and certification of agricultural pesticide sprayers in use; and
- Guidelines on the organization and operation of training schemes and certification procedures for operators of pesticide application equipment.

These have been domesticated in Uganda through the Control of Agricultural Chemicals Act Cap 29 whose provisions have guided the pesticides aspects covered in this ESMF.

3.4 World Bank Safeguard Policies

The World Bank Safeguard Policies triggered for MNP are:

OP 4.01 Environmental Assessment
OP 4.09 Pest Management

Details of the safeguards relating to the MNP project are summarized on Table below.

Table 1: World Bank Safeguard policies triggered by ACDP

OP No.	Summary of Safeguard Policy	Triggered ?	Component Implications on the Safeguards	Its implications on the ACDP Project
OP 4.01	**Environmental Assessment**: The objective of OP 4.01 is to ensure that projects financed by the Bank are environmentally and socially sustainable, and that, the decision making process is improved through an appropriate analysis of the actions including their potential environmental impacts.	√	Component 1 involves establishment and operation of demonstration gardens of selected farmer groups and primary schools, of selected crops. In the process, pesticides may be used to enhance production of selected crops. However, the use of pesticides will be very limited because not all schools shall establish demos, and those that may, will have only 0.5 acre demo garden. Therefore the environmental impact will be of very low-intensity, minor, site specific at primary school vegetable gardens and as inputs for the use of smallholder Lead Farmers. The pesticides should be readily managed by farmers, with guidance from the respective Local Government agricultural extension specialists and Environment Officers.	Since the Multi-sectoral Food Security and Nutrition Project is closely linked with ACDP under preparation in that both projects will be implemented in the same Cluster Districts, Environmental and Social Management Framework (ESMF) for ACDP was adapted for MNP. The ESMF shall be disclosed before appraisal, both at infoshop and in-country. Once specific information for individual sub-projects is available, site/project specific ESMPs will be prepared during implementation. Specific guidance on the handling, use of pesticides and disposal of empty pesticide containers shall be included in the Project Operational Manual.
OP 4.04	**Natural Habitat**: The Bank supports the protection, maintenance, and rehabilitation of natural habitats and their functions. The conservation of natural habitats is essential for long term sustainable development.	X	The project will be implemented in established farmlands and primary schools and will not in any way impact on any natural habitat.	This policy is not triggered.
OP 4.09	**Pest Management**: In Bank-financed agriculture operations, pest populations are normally controlled through IPM approaches, such as biological control, cultural practices, and the development and use of crop varieties that are resistant or tolerant to the pest. The Bank may finance the purchase of pesticides when their use is justified under an IPM approach.	√	Component 1 involves establishment and operation of demonstration gardens of selected farmer groups and primary schools, of selected crops. In the process, pesticides may be used to enhance production of selected crops. The use of pesticides poses some health and safety risks. These have a potential of causing environmental impacts that require assessment and mitigation recommendations. However, the use of pesticides is expected to be very limited both in scope and quantities.	A Pest Management Plan has been prepared as part of the ESMF. In addition, specific guidance on the handling, use of pesticides and disposal of empty pesticide containers shall be included in the Project Operational/Implementation Manual.

OP No.	Summary of Safeguard Policy	Triggered ?	Component Implications on the Safeguards	Its implications on the ACDP Project
OP 4.10	**Indigenous peoples**: This policy calls for free, prior and informed consultation that should result in broad community support to the project by the affected indigenous peoples. This policy also emphasizes that World Bank financed projects be designed in such a way as to ensure that the Indigenous Peoples receive social and economic benefits that are culturally appropriate and gender and inter-generationally inclusive.	X	Project implementation will specifically cover Masaka, Mpigi, Rakai, Iganga, Bugiri, Namutumba, Pallisa, Tororo, Butaleja, Kapchorwa, Bukwo, Mbale, Soroti, Serere, Amuru (including Nwoya), Gulu, Apac (including Kole), Oyam, Lira (including Dokolo), Kabarole, Kamwenge, Kasese, Kyenjojo (including Kyegwegwa), Mubende, Kibaale, Hoima, Masindi, Kiryandongo, Ntungamo, Kabale, Bushenyi, Isingiro, Nebbi, Arua (including Nyadri), and Yumbe. There are no indigenous peoples in these districts.	This policy is not triggered because there are no indigenous peoples in the selected project areas.
OP 4.11	**OP 4.11 Physical Cultural Properties**: This policy addresses physical cultural resources, which are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance.	X	The project does not involve any civil or earthworks.	This policy is not triggered.
OP 4.12	**Involuntary Resettlement**: This policy observes that involuntary resettlement may cause severe long-term hardship, impoverishment, and environmental damage unless appropriate measures are carefully planned and carried out.	X	Schools that will be selected to host the demonstration gardens shall be chosen after confirming availability of at least one half acre of available arable land within the school boundaries and therefore there will be no need for land acquisition.	This policy is not triggered.
OP 4.36	**Forests**: The objective of this policy is to assist borrowers to harness the potential of forests to reduce poverty in a sustainable manner, integrate forests effectively into sustainable economic development, and protect the vital local and environmental services and values of forests.	X	By design, the project will not support and/or involve any significant forestry conversion/degradation activities.	This Policy is not triggered.
OP 4.37	**Safety of Dams**: The Bank distinguishes between small and large dams where large dams are 15 m or more in height. Dams that are between 10 and 15 m in height are treated as large dams if they present special design complexities. Dams more than 10 m in height are treated as large dams if they are expected to become large dams during the operation of the facility.	X	MNP does not entail development of dam structures.	N/A
OP	**Projects on International Waterways**: This policy			

OP No.	Summary of Safeguard Policy	Triggered ?	Component Implications on the Safeguards	Its implications on the ACDP Project
7.50	applies to the following types of international waterways: (a) any river, canal, lake, or similar body of water that forms a boundary between, or any river or body of surface water that flows through, two or more states, whether Bank members or not; and (b) Any tributary or other body of surface water that is a component of any waterway described in (a) above.	X	N/A	N/A
OP 7.60	**Projects in Disputed Areas**: Projects in disputed areas may raise a number of delicate problems affecting relations not only between the Bank and its member countries.	X	The project will not be implemented in disputed areas.	N/A

4 STAKEHOLDER CONSULTATIONS AND DISCLOSURE

4.1 Overview

Consistent with best practice in developing ESMFs, consultations were held with relevant stakeholders. Consultative meetings were held during field visits with the key stakeholders and institutions including: MAAIF, NAADS, NARO, MUK, NEMA, Uganda Coffee Development Authority, Local Government Officials of Kasese and Namutumba, Line Ministries and, Lead Agencies.

4.2 Objectives of the stakeholder consultations

The consultations with these stakeholders were carried out to specifically achieve the following objectives:

- To provide information about the project and to tap stakeholder information on key environmental and social baseline information in the project area;
- To provide opportunities to stakeholders to discuss their opinions and concerns and accordingly inform project design;
- To identify specific interests and the participation of the poor and vulnerable groups can be enhanced; and
- To inform the process of developing appropriate management measures as well as institutional arrangements for effective implementation of the MNP.

4.3 Some of the Key Stakeholder Concerns and views concerning use of pesticides under MNP

The stakeholders raised some concerns which are reflected in Table below:

Issue Raised	Remarks
Mugume Peter – Farmer (Kabale District) **Mwesigye Elias John – Farmer (Kabale District)** Helping bring pesticides is a welcome undertaking but of recent in the villages, the pesticides are being increasingly abused i.e. committing suicide, killing of birds in rice fields and poisoning dogs. How can such abuses be controlled? How will fertilizers and pesticides be distributed in the project? Will they be free or they will be sold out?	The Pest Management Plan elaborates mitigations to address the challenges. MAAIF will liaise with the Department of environmental Health in the Ministry of Health (MoH) to collect and keep accurate statistics on pesticide poisonings events in MNP project areas. In addition MoH will work with MAAIF and relevant NGOs to raise awareness on actions that will target the different pesticide users in order to avoid such accidents and incidents.
Gift Grace- Agro-Chemical Shop Attendant of Mo-AgroLinK in Kiryandongo District There is no supervising authority and the sale of fake chemicals is not checked in any way. The town council issues trading license to the drug shop but is not bothered of what is sold.	The PMP recommends that MAAIF works with UNADA and UNBS to address the issue of fake and adulterated pesticides on the market.
Dr. Friday Agaba – Commissioner – Principal Medical Officer, Ministry of Health Pesticide abuse has become a serious problem in	MAAIF will continue to liaise with MoH under the MNP to ensure that the health impacts of the MNP through pesticide use are minimized. In addition, MoH will as

this country. If the project envisages the use of pesticides, then it should work with the MoH to put in place proper safeguards to ensure that cases of pesticide abuse do not increase.	well provide statistics related to pesticide misuse such as poisonings etc.
Mr. Julius Oboth – Imports Officer at Uganda Revenue Authority. Over the years, we have engaged in inspection to ensure that banned and fake pesticides are not imported into the country. We shall continue working with MAAIF Inspectors to address this issue.	It is very critical for MAAIF Inspectors to be present at the different entry points to help URA identify fake pesticides. In addition, MAAIF should train URA Staff accordingly as the pesticide formulations and trade names continue to change over time.
Mr. Stephen Okia – Analyst at Government Analytical Laboratory – Wandegeya GAL has the capacity to analyze pesticides to determine quality as well as for environmental monitoring purposes.	GAL will play an important role in testing of pesticides as part of its mandate.
Kasimbazi James- District NAADs Coordinator- Kabale District The rainy seasons are increasingly becoming shorter due to unpredictability of the weather therefore, is government putting aside money for research into fast maturing crops to cope with rampant short rains?	It is necessary for MAAIF through research by NARO to deploy in the production system with the diversity needed not only to adapt to the new climatic conditions but also to the new pathogens that might arise as a result of changing climates.
Ms Patricia Ejalu – Deputy Executive Director – Technical, UNBS The current number of staff is 240 short of the required number estimated at 463 staff. This staffing gap continues to limit the organization in executing its mandate. For example, out of 35 entry border points, only 17 are currently being manned by UNBS.	There is need for UNBS to work together with ACB within MAAIF to control the entry and the continued presence of fake pesticides on the market. In addition, UNBS needs to recruit more staff to match the existing inspection needs in general.

Dr. Mark Erbaugh – IPM CRSP in Uganda Constraints to IPM Adoption – The farmers have been ignored for a longtime and don't know what to do.	There is need for MAAIF or Government to show interest in what they (farmers) do. The farmers need to be trained to build their confidence. There is need to demonstrate to them and to make them participate. This can be done through village schools that can be run by extension staff to teach the farmers.
Extension workers need training in areas of pest and disease identification, IPM and alternatives to pesticide use as well as in-service training i.e. new areas of science to help them do their job. In addition, there is need to redefine the role of extension workers.	Critical issue. The Pest Management Plan elaborates the training requirements for the extension staff and farmers at different levels.
Pesticides Misuse – There is need to sensitize the masses. An interesting example is the practice of spraying harvested tomatoes with fungicides to preserve tomatoes sold in markets.	There is need for more monitoring and surveillance as well as testing of food on the markets for pesticide residues and contamination.

5 PROJECT ACTIVITIES, IMPACTS AND MITIGATIONS MEASURES

5.1 MNP Project Activities

The project approach is to plan and coordinate nutrition actions across multiple sectors (agriculture, health, and education), but to implement interventions within each sector, following *existing systems, budgets, and accountability structures. Interventions will be primarily* delivered at primary school and community-level and to improve coverage of nutrition services in agriculture, health, and education; and increase access and availability of nutrition information, inputs, and commodities. To generate demand, the project will support community mobilization and improved understanding on the importance of nutrition and key actions for nutrition. To deliver these community-based nutrition services, the project will support development of institutional capacities of the relevant line ministries and local government coordination, supervision and monitoring. At a national level, the project will support management, monitoring and evaluation, knowledge dissemination, and policy advocacy. These activities will be structured under three components and implemented over five years. Under this section, Component 1 which has got safeguards implications will be discussed, specifically sub-component 1.2.

5.1.1 Delivery of Multi-sectoral Nutrition Services at Primary School and Community levels

This component will improve service delivery of nutrition interventions through agriculture, health, and education platforms at primary school- and community-levels. The overall approach will be to promote year-round consumption of micronutrient-rich foods by increasing community knowledge about how to produce nutrient-rich foods, awareness about nutrition, and how to prepare and why to consume these foods. Primary schools are uniquely placed to act as demonstration centers for social change and learning, not only for students but for parents and the broader community. In addition, schools are well positioned to further the objectives of the 2003 Uganda Food and Nutrition Policy; most especially promotion of good nutrition, provision of nutrition education and training, and provision of a platform for effective multi-sectoral coordination and advocacy for food and nutrition.

Primary schools are mandated to establish school gardens for demonstration purposes and to deliver nutrition curricula, although these mandates are often neglected. Schools will be used as an entry point to strengthen linkages between the community and line ministries (MOES (primary school teachers), MAAIF (agricultural extension services), and MOH (HCII and VHTs). These supply-side activities will be complemented by interventions to increase demand and utilization of nutrition services. Specific results expected from this component include: (i) Use of primary schools as a platform for community-based nutrition service delivery, specifically through improved linkages between schools, communities, extension agents (e.g. agriculture and health) and Village Health Teams (VHTs), as well as teachers. This will include
agreed and defined protocols and guidelines, to be outlined in the Project Implementation Manual (PIM); (ii) Technology and innovation transfers to promote year round production of micronutrient-rich (including bio-fortified) crops; (iii) Transfer of practical nutrition, health, and hygiene knowledge to students and communities; (iv) Improved access of school children to health promoting services including deworming and age appropriate IFA; and (v) Strengthened outreach to communities, particularly parents of under-2 children, to deliver behavior change communication to promote nutrient-rich diets, improved feeding practices, and health and hygiene messages.

Sub-component 1.1 Community sensitization and establishment/strengthening of community-based institutions (Lead entity: Districts)

This sub-component will support the critical element of community sensitization and mobilization on nutrition, including the use of radio communications. This will include the formation of Parent Groups (PGs), virtually all of whom will be small farming families, and the selection of Lead Farmers from each community who will play a lead role in demonstration, replication, and the adoption of improved agricultural practices.

Sub-component 1.2 Enhancing nutrition services delivered through primary schools (Lead sector: Education)

This sub-component will support the establishment and/or strengthening of school-based nutrition activities. A two stage selection criteria for schools will be overseen by the DNCC, facilitated by Community Development Assistants and/or selected community mobilization NGOs/CSOs. Stage I will involve identification of schools eligible to participate in the project. The eligibility criteria will include: (a) Rural or peri-urban; (b) Government aided schools implementing the Universal Primary Education (UPE) program; (c) presence of head teacher and agriculture teacher; (d) unqualified school audit for the past financial audit. The output of this process will be a list of schools eligible to participate in the project in each district. At Stage II, the eligible schools will complete an application form, which will include the following criteria, selected to identify school-level ownership and readiness for implementation. The criteria for school applications include: (a) Presence of a functional School Management Committee (SMC); (b) An existing, or commitment to establish a functional sub-committee of the SMC, a "School Nutrition Committee", which will include representation of the school administration; (c) existence of at least one half acre of arable and conflict-free land; and (d) Organized PG willing to participate in school level nutrition programs, including time and labor commitments.

The activities under this sub-component will be largely facilitated by the School Nutrition Committee (to consist of a limited number of participants, up to six members, per the Education Action and following lessons from similar projects), consisting of at least the Head Teacher, and/or agriculture/science Teacher, and representative LFs. The School Nutrition Committee will develop a Primary School Nutrition Action Plan (PSNAP), proposed budget, and work plans, implementation and reporting. The proposed PSNAP will be reviewed and adopted by the School Management Committee (SMC) before submission to the district for approval. Existing primary school structures will be used for financial arrangements (described in more detail in institutional arrangements and will be clearly defined in the PIM).

a) ***Establishing/strengthening school demonstration gardens.*** The school demonstration gardens will be the promotional platforms for knowledge and technologies for nutrient-rich food production. The demonstration gardens are expected to be half an acre or less[1], and will be managed by the LFs with support from the PGs. The agriculture extension agent will provide technical support for this process in line with the priorities identified in UNAP (role described below). The School Nutrition Committee will facilitate the purchasing and use of necessary inputs following the approval of the PSNAP and associated budget. Some of the inputs expected to be purchased through this grant to support the school demonstration gardens will include: fruit and vegetable seeds and vines (locally available), bio-fortified crop planting materials sourced through linkages with NAADS, NARO, and DPs) tools, equipment, and fertilizer (organic and inorganic).

b) *School-based nutrition services*

[1]Following local experiences of SNV's similar school garden promotion project

The Head Teacher, the agriculture/science teacher, and other staff will build on national guidelines that have been developed for skills-based agricultural, health, and nutrition education. Nutrition education will be provided to school children at school using materials developed and distributed through this project. In line with the UNAP focus, special focus will be put on promotion of nutritious diets, use of health and nutrition services, nutritious food preparation and food safety practices; promotion of safe water and sanitation, and improved hygiene practices such as hand-washing; anti-helminthic drugs; iron supplements for adolescent girls; and micronutrient powders for school-based meals.

***Sub-compon*ent 1.3 Agriculture support for school-based nutrition services (Lead sector: Agriculture)**

To build the use of the primary school as a platform for knowledge transfer to the broader community, this sub-component will support strengthened linkages between agriculture crop extension agents and participating primary school demonstration gardens. The agriculture crop extension agents will provide technical support for demonstrations of micronutrient-rich food production, including supporting the development of the PSNAP, associated decisions about procurement, and delivery of a pre-developed curriculum based on the UNAP priorities[2]. Curricula are already available from previous experiences with school gardens[3] and existing projects promoting home production of nutrient-rich foods. Following initial district consultations, MAAIF will identify district-specific selection of 3-4 locally available nutrient-rich seed varieties to be promoted through the project. This builds upon the findings from existing projects that homestead garden promotions should have simple and consistent messaging regarding dietary diversification[4]. Considerations for seed variety selection will include local availability, local food preferences, and agro-ecological zone and growing conditions. In addition to these locally available seed varieties, MAAIF will follow a similar process to identify 1-2 context-appropriate improved nutrient-rich seeds/vines for promotion by this project (e.g. orange fleshed sweet potato, iron-rich beans, protein-rich maize). The primary criteria for these improved seeds/vines will be their availability and appropriateness for the district context.

5.2 Positive Impacts

The project will have a number of positive social impacts for people such as: creation of employment opportunities for the local workers to be recruited on the project especially amongst neighboring communities; there will be improved accessibility to farm inputs such as fertilizers, pesticides, improved seeds, improved water and soil management, and this is expected to translate into improved production and consumption of nutrient rich foods, and thus reducing stunted growth in children and improving the general health and wellbeing of the target districts/communities.

In conjunction with ACDP, there will be support to the registration of pesticides, dealers and premises that are handling pesticides which will go a long way to control marketing of adulterated inputs. The project will create awareness on pesticide aspects such as safe usage, handling and disposal of pesticides, including support to a pesticide poison information facility. The development of seed demand information system will serve to inform stakeholders about availability, quality and quantities of seed materials.

[2] To include seed selection, use of improved seeds, and seed storage; improved water and soil management; use of organic and inorganic fertilizer and pesticides; year-round production of nutrient-rich crops; labor saving technologies and innovations; and post-harvest handling/value addition and storage

[3] SNV, School Gardens; FAO

[4] USAID Community Connector (implemented by FHI 360), Robert Mwadime,

MNP is expected to have significant positive impact on social and poverty conditions by increasing productivity and production of nutrient rich foods including promoting their consumption. The process has been designed to ensure the inclusion of women and youth in the management of farms (and/or agribusiness) enterprises.

5.3 Potential Negative Impacts and Mitigation

Some of the associated negative environmental and social impacts include possible point and non-point pollution of water sources from the use of pesticides and fertilizers, health and safety impacts arising from poor handling and application of pesticides at farmer and school demonstration gardens. Most of these impacts are minor or of low-intensity, site-specific and thus relatively straight forward to manage, with participation of the Local Governments and respective line Ministries.

Sensitization and awareness of all the schools and farmers involved in the project is key and shall be undertaken before start of the project. In particular, the project beneficiaries shall be mandated to go thru Pesticides Use Training before using them. They will be trained in IPM practices, post-harvest handling of crops, storage, disposal as well as safe use and handling of pesticides. Training for "safer pesticide use" is a common approach to mitigate the potential negative health and environmental impacts of pesticides. This conventional approach will promote reducing health risks of pesticides by safer use of the products through training, use of protective equipment and technology improvements, as well seeking to reduce pesticide hazards via regulations and enforcement in addition to the training. Under ACDP, a well-illustrated booklet on safe pesticide use designed for self-learning will be developed and distributed to farmers, Extension staff, stockists and their staff. This booklet shall be applied and used in MNP.

6 PROCEDURES FOR MNP SUBPROJECT PREPARATION AND ASSESSMENT

6.1 Environmental Screening under OP 4.01 Environmental Assessment

The classification of each subproject under the appropriate environmental category will be based on the provisions of the World Bank Operational Policy on Environmental Assessment (OP 4.01). The environmental and social screening of each proposed sub-project will result in its classification in one of the three categories - A, B or C, depending on the type, location, sensitivity and scale of the subproject and the nature and the magnitude of its potential environmental and social impact:

Category A: An ESIA is always required for projects that are in this category. Impacts are expected to be 'adverse, sensitive, irreversible and diverse with attributes such as pollutant discharges large enough to cause degradation of air, water, or soil; large-scale physical disturbance of the site or surroundings; extraction, consumption or conversion of substantial amounts of forests and other natural resources; measurable modification of hydrological cycles; use of hazardous materials in more than incidental quantities; and involuntary displacement of people and other significant social disturbances. The impacts under this category affect broader area than the sites or facilities subject to physical works. **Such subprojects would require a full ESIA.**

Category B: Any project which is likely to have potential environmental and social impacts, which are less adverse than those of category A projects, on human populations or environmentally important areas including wetlands, forests, grasslands and any other natural habitat. The impacts are usually site specific, few or none of them are irreversible, and most of them are mitigated more readily than impacts from category-A sub projects. **Although an ESIA is not always required, some environmental analysis is necessary. Such subprojects would require an ESMP.**

Category C: Any project which is likely to have minimal or no adverse environmental and social impacts. Beyond screening no further ESA action is required. **No assessment would be required under World Bank requirements.**

The MNP Project has been assigned Environmental Category B. Therefore, no sub-project is expected to fall under EA Category A.

6.2 Environmental and Social Assessment in Uganda

The key regulations for environmental and social assessment in Uganda include the National Environment Act, the EIA Regulations, 1998, the EIA Guidelines of 1997 and the National Environment (Audit) regulations, 2006. The National Environment (Environmental Impact Assessment) Regulations, 1998 define the role of ESIA as a key tool in environmental management, especially in addressing potential environmental impacts at the pre-project stage. The regulations define the ESIA preparation process, required contents of an ESIA, and the review and approval process including provisions for public review and comment. The regulations are interpreted for developers and practitioners through the Guidelines for Environmental Impact Assessment in Uganda (1997). Although assessments nowadays conducted and submitted to NEMA are now termed "Environmental and Social Impact Assessment" , in common with best international practice, this term is not used in the environmental Regulations or Guidelines. The acronyms EIS and EIA are used in reference to environmental impact statement and environmental impact assessment respectively. However, the acronyms ESIS and ESIA are used herein to refer to environmental and social impact statement and environmental impact and social assessment respectively to include the social

component in line with best international practice. The section below illustrates the steps involved during environmental and social assessment and management process as per Ugandan regulations that will lead to the review and approval of subprojects under the MNP.

6.3 Key Steps

The section below illustrates the steps involved during environmental and social assessment and management process as per Ugandan regulations and World Bank safeguard policies that will lead to the review and approval of subprojects under the MNP.

6.3.1 Step 1: Screening of Activities and Sites

MAAIF will carry out scoping and screening of the sub-projects using the Environmental and Social Screening Form (ESSF) in Annex 1. The ESSF requires information that determines the characteristics of the prevailing local bio-physical and social environment with the aim of assessing the potential project impacts on it. The ESSF should also identify the potential socio-economic impacts that will require mitigation measures and or resettlement and compensation.

6.3.2 Step 2: Assigning the appropriate Environmental Categories

a. MAAIF will then assign the appropriate environmental category to the subproject based on the information contained in the ESSF and the national criteria for categorization. The potential categories, in line with the National Environment Act and EIA Guidelines are:
b. Activities that require a full Environmental and Social Impact Study (ESIS), either because (i) they meet the general criteria in the Third Schedule of the National Environment Act, NEA (see Annex 3 an extract of the NEA), i.e. are out of character with their surroundings, are of a scale not in keeping with surroundings, or involve major changes in land use; (ii) are types of projects listed in the Third Schedule; (iii) are located in a nature conservation area; or (iv) are identified in other laws or regulations as requiring EIA because of their location. Under the World Bank categorization, these are likely to fall under Category A. Therefore, based on the final design of the irrigation sub-components, and since they are implied under list 4 in the Third Schedule of NEA, these may be subjected to a full Environmental and Social Impact Study (ESIS). The rest of the sub-projects will either require a Project Brief or ESMP, or may be exempt.

c. Activities for which additional information is needed to determine what level of environmental analysis and/or management is appropriate and for which mitigation is easily identifiable. These will likely be Category B under the World Bank categorization. Under GoU requirements, a Project Brief suffices and under the World Bank requirements, an ESMP suffices.

Activities that are determined to have no significant or adverse potential impact on the environment (List A, annex 2 of the 1998 EIA Guidelines, see Annex 4 herein). Projects defined as List A will not need any further work as they are predicted to have little or no impact. But a Project Brief may be required to be submitted to NEMA. These will likely be Category C projects under World Bank categorization.

6.3.3 Step 3: Carrying out Environmental Assessment

The ESIA will be conducted by the consultancy firms registered by NEMA. However, Project Briefs may be prepared by non-NEMA registered persons. A Project Brief doesn't require preparation of ToRs but their approval is done by NEMA. However, in case an ESIA needs to be undertaken, the ToRs for the study will be prepared by implementing agency and reviewed and approved by NEMA. The ESIA report will identify and assess the potential environmental and social impacts for the

planned activities, assess the alternative solutions, and will design the mitigation, management and monitoring measures to be implemented.

According to the National Environment Act, "project brief" means a summary statement of the likely environmental effects of a proposed development referred to in section 19. Unlike the ESIA, a project brief does not require a scoping report and neither submission of terms of reference for approval by NEMA. The ESMP or Project Brief will for each potential impact include: mitigation measures, monitoring indicators, implementing and monitoring agencies, frequency of monitoring, cost of implementation, and necessary capacity-building. It is possible that after completing the Checklist, the Environmental Specialist may recommend that the subproject concerned should be subjected to a full ESIA, and submitted to NEMA for review and decision making. According to Regulation 5 of the EIA Regulations, 2006, a Project Brief is to contain amongst others, the following:

a. the nature of the project in accordance with the categories identified in the Third Schedule of the Act;
b. the projected area of land, air and water that may be affected;
c. the activities that shall be undertaken during and after the development of the project;
d. the design of the project;
e. the materials that the project shall use, including both construction materials and inputs;
f. the possible products and by-products, including waste generation of the project;
g. the number of people that the project will employ and the economic and social benefits to the local community and the nation in general;
h. the environmental effects of the materials, methods, products and by-products of the project, and how they will be eliminated or mitigated;
i. Any other matter which may be required by the Authority.

In addition to the above, it is currently a practice and requirement by NEMA to include details of stakeholder consultations in Project Briefs.

6.3.4 Step 4: Public Consultations and Disclosure

Public consultation will be initiated during the scoping and ESIA preparation stages and views of stakeholders (general public and lead agencies) have to be included in a Project Brief as well. Public consultation will also be an integral part of the process throughout the planning and execution of the project. MAAIF will interact closely with PAPs/communities, project personnel, government departments, NGOs right from the early stages of the project preparation on a regular basis for developing and implementing the respective project ESIAs and RAP where applicable. For this purpose, public contact drives shall be organized by MAAIF and public awareness shall also be created with NGO's and other social organizations active in the affected areas. During the public awareness drives, it will be ensured that only accurate information is given about the project and its possible environmental and social impacts. The opinion/suggestions made by the community/affected groups shall be incorporated in the respective ESIA and Resettlement Action Plans. After clearance, the assessment reports (ESIS, RAPs, and PBs etc.) shall be disclosed both in Uganda through the daily print media by Implementing Agency and at WB's *Infoshop* by IDA.

6.3.5 Step 5: Review and Approval

Following internal review of the ESIS or PB, by the respective implementing agency and the Bank the ESIS or PB will be forwarded to NEMA for final review and decision (approval or disapproval). If the Executive Director is satisfied that the subproject will have no significant impact on the environment, or that the assessment (Project Brief or ESIS) discloses sufficient mitigation measures

to cope with the anticipated impacts, he may approve the project. The Executive Director of NEMA or his delegated official shall then issue an EIA Certificate of Approval for the project.

It is important to note that this review and approval process is to be carried out in parallel with the review and approval of the technical, economic, financial and other aspects of the subprojects. Implementation of subprojects cannot commence until the environmental and social aspects have been reviewed and appropriate mitigation measures have been adopted. As possibilities of social impacts regarding land acquisition, the implementation of subprojects cannot proceed until the resettlement and/or compensation plans have been prepared and implemented after clearance by the Chief Government Valuer in the Ministry of Lands, Housing and Urban Development (MoLHUD). However, this may not apply to MNP because the Schools that will be selected to host the demonstration gardens shall be chosen after confirming availability of at least one half acre of available arable land within the school boundaries and therefore there will be no land acquisition.

6.3.6 Step 6: Environmental Monitoring

Environmental and social monitoring aims at checking the effectiveness and relevance of the implementation of the proposed mitigation measures. Monitoring exercises should be undertaken in sequences and frequencies stipulated in the ESIS, PBs, RAPs, or ESMPs. Local Government leaders, District Environment Officers, Community Development Officers as well as NGOs and CBOs will undertake monitoring exercises as required by the National Environmental Act. The District Environment Officer in conjunction with the District Community Development Officer will monitor the implementation of environmental and social mitigation measures.

The monitoring indicators will be developed by implementing agencies' Environmental Specialists based on the mitigation measures and the ESMP. Each subproject progress report will include monitoring of the RAP where applicable and other social issues covered by the ESMF. In case of any civil works, at the end of subproject construction phase, a Certification for Compliance integrating Environmental and social issues for the completion of works is issued by implementing agency.

MAAIF will have the lead role in monitoring to ensure that various project environmental and social obligations are met, and will ensure that the requirement for an environmental and social audit is fulfilled not less than 12 nor more than 36 months after project completion or commencement of operations respectively in line with the National Environment Act and the Audit Regulations of 2006.It is critical to note that NEMA has a regulatory coordinating role in monitoring of compliance with permits, standards, regulations and all approval conditions. However given the scale of the school and farmer demonstration gardens to be established, the respective District Environment Officers shall bear the main responsibility of follow up and provision of required guidance from time to time.

6.4 Other Safeguards Guiding Documents

6.4.1 Pest Management Plan

Since the MNP triggers OP 4.09 for pest management, a Pest Management Plan (PMP) has been prepared as part of this ESMF. However, the use of pesticides will be very limited because not all schools shall establish demos, and those that may, will have only 0.5 acre demo garden. Therefore the environmental impact will be of very low-intensity, minor, site specific at primary school vegetable gardens and as inputs for the use of smallholder Lead Farmers. A stand-alone PMP was therefore deemed not necessary. The PMP prepared as part of this ESMF is meant to enhance IPM within

Uganda to ensure a guided acquisition, storage, handling and application of pesticides. The plan includes development of comprehensive strategies for handling, transportation, application and disposal of pesticides in compliance with national and international requirements relating to different agrochemicals. The PMP addresses relevant stakeholder concerns about pests and pesticides. It stresses the need to monitor and mitigate negative environmental and social impacts of the MNP (which includes the use of pesticides) and emphasizes the need for an integrated approach to the management of pests in line with Uganda's strategies on IPM adoption as well as World Bank requirements on pest management and makes provision for adequate measures to enable the Project sustain the adoption of IPM techniques.

In terms of guiding implementation of MNP, the Project Operational/Implementation Manual is recommended to incorporate guidelines that clearly stipulate procedures for acquisition, storage, handling, application and disposal of pesticides. For purposes of this ESMF, the following basic guidance and information is provided as PMP:

Key Elements of MNP IPM Plan

The elements of the MNP IPM will include the following:

(a) Preventing pest problems;
(b) Monitoring for the presence of pests and pest damage;
(c) Establishing the density of pest population, which may be set at zero, that can be tolerated or corrected with a damage level sufficient to warrant treatment of the problem based on health, public safety, economic or aesthetic threshold;
(d) Treating pest problems to reduce population below those levels established by damage thresholds using strategies that may include biological, cultural, mechanical and pesticidal control methods and that shall consider human health, ecological impact, feasibility and cost effectiveness; and
(e) Evaluating the effects and efficacy of pest treatments.

Decision Making - Detecting a single pest under the Project will not always mean control is needed. A decision to use pesticides will be taken only as the very last resort and will also be based on conclusions reached from an agro-ecosystem analysis and trials. The decision under MNP will also depend on the number of pest and diseases found in the respective crop and the level of damage they are doing. If it is absolutely necessary to spray crops with pesticides, use of selective rather than broad-spectrum pesticides shall be strictly observed.

Pest Monitoring and Surveillance - A process for the reporting and identification of unusual plants, animals and pests will be established to track and document all pest cases, be it minor or major in a pest inventory register. Pest surveys will be conducted on a regular basis to detect new infestations and will include the types, abundance, location of pest plants, date when first spotted or seen, and date when reported. This information will be gathered from surveillance or monitoring system to be put in place, periodic surveys to be conducted and feedback from farmers/farm assistants. The data will be managed in a standardized way so that trends can be established. A rapid response process for the management of new infestations will be established to treat and manage new pest infestations as soon as they are identified. The potential to exploit mobile phones to enhance field surveillance of disease outbreaks and the efficacy of recommended control options is massive and will help to bridge the current gap between science and practice. Furthermore, enhanced field surveillance through

interventions such as this will permit the project to recognize risks due to disease earlier and to deploy control measures to prevent catastrophic disease epidemics.

Procurement of Pesticides
The following criteria will apply to the selection and use of pesticides in activities under MNP:

- Pesticide financed under MNP must be manufactured, packaged, labeled, handled, stored, disposed of, and applied according to standards that, at a minimum, comply with the FAO's guidelines on pesticides.

- Consistent with World Bank OP 4.09, MNP financing will not be used for formulated products that fall in WHO classes IA and IB, or formulations of products in Class II, if (a) the country lacks restrictions on their distribution and use; or (b) they are likely to be used by, or be accessible to, lay personnel, farmers, or others without training, equipment, and facilities to handle, store, and apply these products properly.

- MNP financing will not be used for any pesticide products which contain active ingredients that are listed on Annex III of the Rotterdam Convention (on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade), unless the Country has taken explicit legal or administrative measures to consent to import and use of that active ingredient.

- MNP financing will not be used on any pesticide products which contain active ingredients that are listed on Annex A & B of the Stockholm Convention on Persistent Organic Pollutants, unless for an acceptable purpose as defined by the Convention, or if an exemption has been obtained by the Country under this Convention.

- MNP financing will not be used for any pesticide products which contain active ingredients that are listed on Annex III of the Rotterdam Convention (on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade), unless the Country has taken explicit legal or administrative measures to consent to import and use of that active ingredient.

Procurement Challenges by Farmers
Challenges associated with direct procurement of pesticides by smallholder farmers in Uganda include the proliferation of illegal imports by unscrupulous private companies and the presence of unlicensed dealers. There are many fake or adulterated pesticides on the market. However, purchase of pesticides through ACEs presents a solution to this problem.

Distribution of Pesticides

Cluster Stores - Pesticides will be stored at one Cluster Store under ACDP and will then be dispersed to each District Store when need arises. The stores will have to be maintained in good condition with all the required facilities for proper storage as detailed in the next Chapter. Storage facilities in each District will help alleviate the crowding at the Cluster Store and to reduce the travel distances to the Parish facilities. MNP will use the same cluster stores to acquire pesticides.

Distribution downstream - To help facilitate the accounting of specific stock of pesticides and other logistics, record for each type of stock (i.e. pesticides, gloves – number and date bought, number and date dispersed to each Parish, number and date returned at end of spray cycle, etc.). This will ensure good accountability and record keeping of pesticide at the Parish level, from dispersal to collection of empty containers at the end of the day. Each Parish store manager or Distributor will have to count out and document the required number of sachets or bottles to be distributed to the Spray Leaders, who in turn will count out and document the sachets and bottles allocated to each spray operator. At the end of the day, the process will be repeated and the used and unused sachets or bottles will be collected and recorded.

Pesticides Usage Records - Under circumstances where MAAIF will directly procure pesticides for distribution to the farmers, it will be required to maintain records of all pesticides annually applied under the project.

Pesticide Use Issues – School and Farmers are likely to misuse pesticides in at least six different ways:

- Spraying too close to harvest, thus contaminating the crop after harvest;
- Applying the wrong dosage, often over-applying. Farmers often spray hazardous insecticides like organochlorines over five times in a season when two or three times can be sufficient;
- Applying pesticides intended for cash crops to growing food crops;
- Spraying pesticides intended for growing crops on stored crops;
- Using obsolete or expired pesticides;
- Mixing different chemical pesticides together.
- Inadequate or non-use of required PPE in handling and applying pesticides.
- Insufficient or lack of knowledge on pesticides use and management by most farmers.
- No use of PPE

In order to proactively address these likely gaps, all the persons in charge at schools and farmer fields where demonstration gardens shall be set up will be trained on the proper acquisition, transportation, use and disposal of pesticides before start of the project implementation. All the areas listed above shall be covered in relative detail. The training will be undertaken both at the PCU, District and Local Levels.

Disposal of Expired Pesticides and Containers

Occasions will arise when it will be necessary to dispose of agro-chemicals concentrates, either because the stock is outdated or has been found to be unusable or because the product is no longer registered for the original purpose. The other issue is the empty containers. The management of pesticides containers is currently under the responsibility of resellers and farmers because of the retail sales system. They find themselves with the most important share of the empty containers which are differently managed. There is widespread re-use of containers for storing food or water for humans or livestock. Indeed, this may well be the most hazardous practice associated with pesticide use in Uganda. Many farmers wash the containers before re-use, but often less thoroughly than is needed. Under the MNP, a scheme will be put in place to collect empty containers. ***MAAIF will engage Luwero Industries to explore the possibility of upgrading the facility to the standard required for pesticide disposal. As part of local solutions, MAAIF shall engage local fabricators to fabricate small-scale incinerators to help smallholder farmers to safely dispose obsolete pesticides.*** But for the long-term, it is certainly time for MAAIF to consider investing in a pesticide incinerator.

Pest Management Plan Implementation

Key Strategies

The project will adopt the following programmes and strategies to achieve an effective pest and pesticide management process:

- Formation of a Safeguard Team
- Registration and training of all interested pesticide distributors/resellers under the Project
- Education and awareness creation on safe pesticides use
- Pests Monitoring and Surveillance Measures
- IPM Capacity Building
- Institutional Capacity Building and Training
- Training of farmers in IPM and safe pesticide use
- Participatory Monitoring and Evaluation

Key Recommended Interventions

- Pest surveillance systems need to be urgently established or bolstered in Uganda to avert the socio-economic disasters that can be caused by plant pests and diseases;
- Smallholder farmers need to have more reliable and timely access to agricultural advisory and extension services to provide them with the knowledge on how to identify and deal with pests and diseases;
- Registration of pesticide distributors and resellers and to train them in safe pesticides management;
- Setup Collection Centers where farmers across the Districts can return empty pesticides container for onward transmission for safe handling and disposal. The collections of empty containers will be a direct responsibility of the Local Government Authority;
- Need for MAAIF to consider construction of a pesticides disposal facility in Uganda.

Safeguards Team - The Project Coordinators/PIU will form a Safeguard Team to oversee the monitoring of pests and pesticide use under the project to ensure that the project complies with national laws, relevant safeguard policies as well as meeting of the country's international obligations.

Implementing Agencies

Institution	**Role/Responsibility**
MAAIF Crop Protection Department	MAAIF will be the focal point for implementation of the PMP and shall coordinate its implementation through a harmonized information management system, financial mechanism and a monitoring and evaluation framework. The PIU will communicate the content of the Pest Management Plan to all project actors or stakeholders including ACB, NAADS, NARO, DAOs, UNBS, NDA, GAL, NEMA etc. at the national and relevant regional levels (i.e. within project clusters). MAAIF will • create awareness among downstream project actors or participants (pesticide distributors/resellers, farmers, farm assistants) of the importance of pest and pesticide management in the framework of this PMP; • Ensure that all downstream actors or participants have access to information on

	relevant crop pests/diseases, MNP IPM strategies regarding pest control, declared pest plants, current ACB list of registered pesticides etc. MAAIF will also: • Liaise with statutory bodies including URA, NDA and UNBS to ensure the importation of quality pesticides; (Already contacted UNBS for PVOC which started May 31 2014). MAAIF has constructed a laboratory to test the pesticide ingredients if in harmony with the label at Namarele. • Liaise with NEMA and GAL to monitor pesticide contamination; • inspect the conditions of pesticide storage and transport; • Together with LGs collect empty pesticide containers; • Inspect pesticide shops to ensure that they are registered or licensed by ACB and trained by the College of Agricultural and Environmental Sciences at Makerere University together with UNADA, on safe use of pesticides. Inspectors will also be required to take samples of pesticides that are expired or suspected of being adulterated for laboratory testing. • Collect agricultural statistics through its Agricultural Statistics Division
LGs	Actual implementation of a large proportion of MNP activities will take place at district level and will fall under the responsibility of local governments. The LGS will: • Conduct surveillance of pests and diseases • Mobilize farmers for training • Distribute pesticides as well as collection of empty containers
GAL	GAL will play a role in inspection to verify via analysis the content of agrochemicals sold to the farmers and to control adulteration. In addition, GAL and other laboratories will be useful in testing of samples to monitor pesticide contamination and food safety issues.
MoH	MoH will be supported to collect and keep accurate statistics on pesticide poisonings events. In addition, it will create awareness raising actions that will target the different pesticide users in order to avoid such accidents and incidents.
ACB (This is established as part of MAAIF)	The ACB will: • Register any new pesticides required under the project. • License any new pesticides suppliers • Development of the project specific IPM Pesticides List • Work with MAAIF inspectors to enforce the pertinent laws
UNBS	UNBS will work hand in hand with ACB, NDA, URA and MAAIF to address issues of pesticides quality. It will have to ensure that the fertilizers and pesticides imported to Uganda for the ACDP meet standards as per guidance of the ACB, NDA and UNBS.
UNADA	UNADA to work with MAAIF and UNBS to address the issue of fake and adulterated pesticides as well as to train more UNADA members in safe agrochemical use so as to effectively advise farmers.
NGOs	NGOs with collaborate with MAAIF and will work with farmers to: • Raise awareness among the smallholder farmers about the dangers of poor pesticide handling and use; • Work with extension staff to teach farmers about safe pesticide use and

	storage; • Work with farmers to develop community monitoring of the use and impacts of pesticides in order to alert the authorities as to the health and environmental impacts of pesticide use; • Empower the smallholders through training and other support to engage with the local government to address their concerns on pesticides use; • Do more to publicize to the public the environmental and health impacts of pesticide use • Work with Government to identify and support necessary policy changes.

Training Needs and Strategy

Training Needs - There is need for training of Agricultural Extension Agents in IPM to become better at providing practical and research-based knowledge of crop production and protection strategies, including non-chemical alternatives. All existing extension workers will be trained in IPM and safer pesticide use who will in turn train the farmers and those directly below them.

Approach - Training farmers in IPM will be through using farmer field school (FFS) type of participatory learning and research programs, jointly with farmers, extension workers, and researchers. The FFS approach will involve a growing season-long informal learning experience in the farmers' own fields.

Pesticides Use Training - The key training needs that have been identified among others include post-harvest handling of crops, storage, disposal as well as safe use and handling of pesticides. Training for "safer pesticide use" is a common approach to mitigate the potential negative health and environmental impacts of pesticides. This conventional approach will promote reducing health risks of pesticides by safer use of the products through training, use of protective equipment and technology improvements, as well seeking to reduce pesticide hazards via regulations and enforcement in addition to the training. Under ACDP, a well-illustrated booklet on safe pesticide use designed for self-learning will be developed and distributed to farmers, Extension staff, stockists and their staff. This booklet shall be applied and used in MNP.

Monitoring and Evaluation

An annual report on the progress of pest and pesticide management will be prepared. The report will indicate the pest cases identified and treated using IPM approaches, location of pests, level of success of treatment, the amount and type of herbicide/pesticide used, level of cooperation from farmers and other relevant information (e.g. training programmes organized, farmer field schools held etc.). The project management will undertake annual pest and pesticide control and management reviews to confirm the implementation of the various control measures or programmes or actions outlined in the IPM. Recommendations from the reviews will help MAAIF to refocus and plan effectively towards achieving planned targets. The management review team will include, NARO, UCDA, NAADS, NEMA and MAAIF Crop Protection Department. Any other required additional technical guidance may be provided by the World Bank.

6.4.2 Grievance Redress Mechanism

Grievance redress mechanisms provide a way to provide an effective avenue for expressing concerns and achieving remedies for communities, promote a mutually constructive relationship and enhance

the achievement of project development objectives. Grievance redress mechanisms are increasingly important for development projects where ongoing risks or adverse impacts are anticipated. They serve as a way to prevent and address community concerns, reduce risk, and assist larger processes that create positive social change. It has been learned from many years of experience that open dialogue and collaborative grievance resolution simply represent good business practice both in managing for social and environmental risk and in furthering project and community development objectives.

Community Expectations When Grievances Arise

When local people present a grievance, they generally expect to receive one or more of the following:

- Acknowledgment of their problem
- An honest response to questions about project activities
- An apology
- Compensation
- Modification of the conduct that caused the grievance
- Some other fair remedy.

In voicing their concerns, they also expect to be heard and taken seriously. Therefore, the project's PCUs must convince people that they can voice grievances and the project will work to resolve them without retaliation.

Procedures and Time Frames

There is no ideal model or one-size-fits-all approach to grievance resolution. The best solutions to conflicts are generally achieved through localized mechanisms that take account of the specific issues, cultural context, local customs, and project conditions and scale. In its simplest form, a grievance mechanism can be broken down into the following primary components:

a. Receive and register a complaint.
b. Screen and validate the complaint.
c. Formulate a response.
d. Select a resolution approach, based on consultation with affected person/group.
e. Implement the approach.
f. Settle the issues.
g. Track and evaluate results.
h. Learn from the experience and communicate back to all parties involved.

Grievance Prevention

There are ways to proactively solve issues before they even become grievances. Implementers should be aware and accept that grievances do occur, that dealing with them is part of the work, and that they should be considered in a work plan. Implementers should do the following:

a. **Provide sufficient and timely information to communities**. Many grievances arise because of misunderstandings; lack of information; or delayed, inconsistent, or insufficient information. Accurate and adequate information about a project and its activities, plus an approximate implementation schedule, should be communicated to the communities,

especially PAPs, regularly. Appropriate communication channels and means of communication should be used.

b. **Conduct meaningful community consultations**. MAAIF should continue the process of consultation and dialogue throughout the implementation of the project. Sharing information, reporting on project progress, providing community members with an opportunity to express their concerns, clarifying and responding to their issues, eliciting communities' views, and receiving feedback on interventions will benefit the communities and the project management.

c. **Build capacity for project staff, particularly community facilitators and other field-level staff**. The community-level facilitators and field-level staff of MAAIF should be provided with adequate information on the project such as project design, activities, implementing schedules, and institutional arrangements as well as enhanced skills in effective communication, understanding community dynamics and processes, negotiation and conflict resolution, and empathizing with communities and their needs. Building trust and maintaining good rapport with the communities by providing relevant information on the project and responding effectively to the needs and concerns of the community members will help solve issues before they even become grievances. It is also important that community facilitators and field-level staff provide regular feedback on their interactions with the communities to the higher levels of the implementing agencies.

Mechanism under MNP

Local grievance redress committees (LGRC) will be initiated at the school/village level to record grievances and also help in mediation. This committee will comprise the LC I Chairperson, the School Head Teacher, a trusted village elder, a religious representative, and specific vulnerable group representatives of relevance to the village i.e. women and the disabled. Disputes will be resolved at the village level as far as possible. The GRC at the Sub County level will comprise the LC III Chairperson, Sub County Chief, a representative of vulnerable groups (women etc.) and the Councilor of the Parish. At the District Level, the Grievance Redress Committee will be established to deal with any grievances unsettled at the village level. The Grievance Redress Committee at the district will at a minimum comprise the LC3 representative, representatives of vulnerable groups, District Land Officer/Surveyor, District Community Development Officer and a Grievance Officer from the implementing agency who will oversee and coordinate grievance issues at the village level including setting up of LGRCs, provision of Grievance Logbooks and related logistics, training and orientation of LGRCs, and providing advice on grievance resolution as well as compiling records of all grievances raised and their mediation for the whole district. The grievance mechanism for the implementation process is as follows:

a. The LGRC will interrogate the PAP in the local language and complete a Grievance Form which will be signed by the leader of the LGRC and the PAP/complainant. This will then be lodged in the Grievance Log/Register provided by the Grievance Officer;
b. The PAP should expect a response from the LGRC within seven days of filing the complaint. If the issue is not resolved, the LGRC will forward the complaint to the GRC at the Sub County;
c. The GRC at the Sub County will be given a fourteen day notice to hold a meeting. Two days after the meeting, the Sub County GRC will call the PAP and LGRC for discussions and resolution. The resolution will be presented to the PAP in written form within the same day of the meeting. If there is no resolution to the grievance, the GRC at the Sub County and the PAP shall then refer the matter to the GRC at the District;

d. The GRC at the District will be given a fourteen day notice to hold a meeting. Two days after the meeting, the GRC will call the PAP and LGRC for discussions and resolution. The resolution will be presented to the PAP in written form within the same day of the meeting;
e. If there is no resolution to the grievance, the GRC at the district and the PAP shall then refer the matter to the District Land Tribunal for land-related issues and to MAAIF head office for all other grievances;
f. Appeal to Court - The Ugandan laws allow any aggrieved person the right to access to Court of law. If the complainant still remains dissatisfied with the District Land Tribunal or MAAIF top management in Kampala, the complainant has the option to pursue appropriate recourse via judicial process in Uganda. Courts of law will be a "last resort" option, in view of the above mechanism.

7 ESMF IMPLEMENTATION FRAMEWORK

7.1 Ministry of Agriculture, Animal Industry and Fisheries

Mandate and Responsibility – MAAIF is responsible for policy formulation, planning, setting standards on irrigation, aquaculture and water for livestock. The Crop Protection Directorate of MAAIF is in charge of all matters related to plant health, including issuance of import and export phytosanitary certificates for live plant material and horticultural crops, as well as for plant pest prevention or eradication programmes. The department is also responsible for enforcing regulations on registration and the use of pesticides and other agrochemicals. The Ministry of Agriculture, Animal Industry and Fisheries - MAAIF will be the main implementing unit of this project at national level, working in liaison with local governments in the respective districts.
Specifically for MNP, Day-to-day project-wide implementation will be under the aegis of a dedicated Project Coordination Unit (PCU) which reports to the MAAIF Permanent Secretary. The PCU will be comprised of a Project Coordinator, administrator, procurement specialist, accountant, M&E specialist and support staff. (Technical support will be provided particularly for financial and procurement management, and monitoring and evaluation).

Safeguards Capacity–The Ministry does not have Environmental and Social management specialists. Given the fact that agricultural activities contribute cumulatively to environmental degradation in Uganda, there should be residential in-house capacity in MAAIF for environmental management. Under ACDP, it was therefore recommended that MAAIF creates in-house positions of Environmental and Social Development Specialists to handle safeguard issues, to ensure effective compliance on implementation, monitoring and reporting on environmental and social issues including land acquisition. The same safeguards specialists will also support implementation of safeguards aspects of MNP.

7.2 Agricultural Chemicals Control Board (ACB)

This is a government agency responsible for controlling the use of agricultural chemicals in Uganda mainly for phyto-sanitary plant/crop protection purposes. This body regulates: (i) herbicides; (ii) pesticides; (iii) fungicides; (iv) fertilizers; (v) insecticides; (vi) plant growth regulators; (vii) seed treatment chemicals; (viii) bio pesticides; (ix) chemicals for wood industry (petroleum and wood treatment); and (x) vector control-the Board also handles chemicals for the control of epidemic pests and diseases. The Agricultural Chemicals Board also gives permits to suitable and approved importers of agrochemicals. The Board also maintains a statistical database of these chemicals. The responsibilities of the Agricultural Chemicals Board under the MNP will include:

- Registration of new pesticides required under the project.
- Licensing on new pesticides suppliers
- Development of the project specific IPM Pesticides List
- Work with MAAIF inspectors to enforce the pertinent laws

Capacity– ACB has a low laboratory staff capacity with only two fully qualified staff and no laboratory equipment for assessing pesticides chemicals. In addition, the ACB is unable to regularly sit to assess the chemicals imported in the country and make decisions; and there are no regular field inspections and surveillance due to a limited budget. ***The ACDP will set aside resources for laboratory and technical capacity enhancement for the key stakeholders and a plan to harmonize activities and share resources where capacity is higher.***

7.3 Ministry of Health

Community Health (CH) Department of the Ministry of Health in Uganda comprises of the cross-cutting areas of health promotion, disease prevention, and community health initiatives, environmental health, school health, as well as gender and health. The Department's major objective is to increase community awareness and health literacy on disease prevention and promotion of healthy lifestyles in order to have a healthy and productive population in Uganda. To achieve this objective research is critical for evidence based policy and decision making. Environmental health programme is one of the main components of the current National Health Policy of Uganda as it is evident that environmental factors are major determinants of public health outcomes. The main objective of the programme is to contribute to the attainment of a significant reduction in morbidity and mortality due to environmental health related conditions.

In the absence of systematic data collection related to pesticide poisoning (accidental or intentional), it is difficult to understand and tackle the problem. The Ministry of Health is expected to keep records on pesticide poisoning and accidents. The Ministry needs to be supported for the collection and keeping of accurate statistics on these events. The district hospitals and Health Centers in the cluster districts will set up databases on incidence of pesticide poisoning, effect of pesticides on human health and environmental contamination. Currently, the data on pesticide poisoning and accidents resulting from pesticides use or disposal must be fragmented and still remains in the various newspapers that have reported such cases, and various hospital cases. There is the need to create awareness raising actions that will target the different pesticide users in order to avoid accidents and incidents.

Under the ACDP, the Department of Environmental Health in the Ministry of Health will be supported to collect and keep accurate statistics on pesticide poisonings events. In addition, it will create awareness raising actions that will target the different pesticide users in order to avoid such accidents and incidents. The department has experts to address pesticides issues but need support to gather information as well as to create awareness on safe pesticides use.
Specifically for MNP, at the national level, the MOH nutrition unit will be responsible for: (i) review and revision of existing VHT nutrition training modules as needed and distribution of training materials; (ii) training of district trainers (Master Trainers) and quality assurance of the cascade training; (iii) collecting and consolidating the key performance indicators for the project; and (iv) management of proposed related operational research. Relevant departments will be involved as needed to ensure that activities follow the existing structures in MOH.

7.4 National Environment Management Authority

NEMA is specifically mandated by the National Environment Act (NEA) Cap. 153 as the principal agency in Uganda charged with the responsibility of coordinating, monitoring, supervising, and regulating all environmental management matters in the country. One of the key institutional mandates of NEMA include among others ensuring the observance of proper safeguards in the planning and execution of all development projects including those already in existence that have or are likely to have significant impact on the environment. The role of NEMA will be to review and approve environmental impact assessments and Project Briefs as well as monitoring records submitted in accordance with the National Environment Act and the respective regulations.

Safeguards Capacity –In general, NEMA is understaffed and constrained mainly due to the limited operational funds and monitoring agricultural activities of smallholder farmers will be a challenge. However, given the expected very low usage of pesticides under MNP, NEMA may largely delegate the compliance assistance role to MAAIF and the respective Distract Environment Officers.

7.5 Uganda National Bureau of Standards (UNBS)

The UNBS is mandated to develop and promote standardization; quality assurance; laboratory testing; and metrology to enhance the competitiveness of local industry and to strengthen Uganda's economy and promote quality, safety and fair trade. UNBS also ensures quality imports through implementation of the Import Inspection and Clearance Regulations 2002 by carrying out inspection of imports to:

- Safeguard the health and safety of the consumers and the environment against imported substandard, shoddy and hazardous products;
- Safeguard our industries from cheap counterfeit imports that can be a threat to our infant industries;
- Ensure that Uganda's hard-earned foreign exchange is not wasted on shoddy, substandard and sometimes dangerous products, which may not only further impoverish the people but also cause ill health sometimes resulting in death.

UNBS will work hand in hand with ACB, NDA, URA and MAAIF to address issues of pesticides quality.

7.6 Government Analytical Laboratory (GAL)

The GAL is a Department under the Ministry of Internal Affairs and has been in existence since 1930's. It is mandated to safeguard lives of people and environment as well as enhancing market competitiveness of products through provisions of forensic and general scientific services. Currently, the main functions of GAL can be broadly categorized as follows:

a. Provision of Forensic science services as back up in assuring national internal security, trans-boundary activities, law and order to all interested parties;
b. Statutory testing for enforcement of public health, environmental standards and regulations; and
c. Advisory and investigative services, important in assuring national internal security, trans-border activities, business competitiveness, health and environmental protection.

This Pesticides Residue Laboratory was set up under the GAL department by the Government of Uganda as a result of fish poisoning saga in 1997. It was a requirement by the European Union for any fish exporting country to establish and build capacity for a pesticide residue laboratory. PRL is mandated to analyze pesticide residues in water, food and environmental samples for both local consumption and export. It further undertakes the examination of residues of agricultural and veterinary drugs in food and food animals that are of health and public concern. For instance, during fish poisoning as indicated above, the laboratory carried out analysis on the fish samples from the market and identified the poison as endosulfan. ***GAL and other laboratories will be useful in testing of samples to monitor pesticide contamination and food safety issues.***

Government Agencies	**Capacity**
Government Analytical Laboratory (GAL)	• Has capacity (equipment and competent personnel) to test for pesticide contamination.
NEMA Laboratory	• No capacity (limited competent personnel and no required equipment) to analyze pesticide contamination.
Department of Chemistry – MUK	• The department of Chemistry can also analyze pesticide contamination and residues in soils, water and agricultural produce.
Department of Soil Science – MUK	• Department of Soil Science has capacity to analyze pesticide contamination and residues.

The Institute of Public Health – MUK	• Institute of Public Health has capacity for research still in infancy at the other universities.
DWR Lab in Entebbe	• No capacity for pesticides; existing equipment can only test for heavy metals and other organics.
Kawanda National Research Laboratory	• No equipment specifically for pesticide residue analysis but competent personnel in place.
Chemiphar (U) Ltd	• Chemiphar is an accredited laboratory and equipped with the recommended type of equipment that can be used for monitoring of pesticides in the environment and food.

7.7 Ministry of Education and Sports

Specifically for MNP, at the Primary School level, existing Government systems to will be used to receive, supervise and report on both its activities and use of project funds: A sub-committee of the School Management Committee (SMC), the School Nutrition Committee, will develop a Primary School Nutrition Action Plan, and associated work plan and budget, which will be reviewed and adopted by the SMC before submission to the district for approval, similar to the process in place for UPE funds but with a new account. The funds will be primarily used for the establishment and maintenance of the demonstration garden and the nutrition demonstrations for PG and students. In addition, a teacher or teachers (preferably the agriculture/science teacher) will be assigned to deliver practical nutrition learning in the curricula. To do so the primary schools will receive materials from MOES and the selected teacher will be provided with supplemental in-service training. Supervision and reporting will follow the existing system to the District Education Directorate/District Education Officer.

In each district the representation on the DNCC from the District Education Directorate should include at least the District Inspector of Schools because that is the position most linked to the primary school in terms of planning, monitoring work plans, and ensuring compliance to government policies and initiatives. As a member of the DNCC, the District Inspector of Schools (DIS) will be responsible for planning and execution of the aspects of the District Nutrition Action Plan, namely activities linked to primary schools.

At the national level, the MOES nutrition focal team (reporting to the Director, Basic and Secondary Education) will be responsible for the review, revision of training materials specific to MOES service delivery. With engagement and support from the appropriate district focal point inspector at the regional level (Regional Directorate of Education Standards), MOES will deliver the training of district Master Trainers; ensure quality assurance of the cascade training; supportive supervision; the collection and consolidation of the key performance indicators of the project; and management of proposed related operational research.

7.8 Local Government Administration Structures

The CAO is responsible for all activities and fund management undertaken in the district.
Local governments will coordinate and monitor the implementation of the project in their respective areas of jurisdiction. District and Local Council Administration will be vital in implementation of the project by mobilizing political goodwill and sensitizing communities on the project as well as their District Environment Officers taking care of environmental aspects of the project at their levels. Each district will have an approved District Nutrition Action Plan (DNAP), developed by the DNCC, chaired by the CAO and composed of the implementing sectors of agriculture, education, health and complementary sectors such as gender, community development, water and sanitation, key district

fiduciary and safeguards staff, a District Nutrition Coordinator. The DNCC will meet regularly to review implementation progress, identify problems, and coordinate efforts.

Safeguards Capacity – The Local Governments have District Environment Officers, District Agricultural Officers, District Community Development Officers and District Gender Officers, some of whom are involved in the current Bank Financed ATAAS and NUSAF-2 Projects. Sub-county extension staff shall also be involved in the implementation of safeguard policies. The DEOs in the respective areas of project implementation will have to monitor the projects to ensure that mitigation measures are adequate and are well integrated in the subproject proposals. The Role of the DEOs will also be to ensure that MNP subproject is implemented in accordance with NEMA conditions of approval. The capacity development of the respective District and Sub County staff needs to be strengthened through a hands-on training on safeguard requirements.

7.9 Role of NGOs

The role and commitment of NGOs is significant in all the stages of the pesticides life-cycle right from the importation, use to waste disposal. NGOs will be fully recognized and brought on board as serious partners in all efforts to ensure safe use of pesticides. In terms of capacity, NGOs in Uganda lack the financial and technical resources required to adequately manage pesticides and related issues. Therefore, there is need for a concerted effort to develop their capacity and other interested players to undertake public awareness on the hazards associated with pesticides and how to safely handle them.

NGOs working with farmers can undertake the following key roles:

a. Raise awareness among the smallholder farmers about the dangers of pesticide use;
b. Work with extension staff to teach farmers about safe pesticide use and storage;
c. Work with farmers to develop community monitoring of the use and impacts of pesticides in order to alert the authorities as to the health and environmental impacts of pesticide use;
d. Empower the smallholders through training and other support to engage with the local government to address their concerns on pesticides use;
e. Do more to publicize to the public the environmental and health impacts of pesticide use

7.10 World Bank

The World Bank will independently review and comment on the safeguards documents on MNP as well as independently monitor the project's environmental and social performance in relation to the respective safeguards during implementation process. Once the World Bank clears the ESMF, it will then be officially disclosed on its website. Technical guidance may also be provided by World Bank to MAAIF as needed.

7.11 Monitoring and Evaluation

Implementation of the ESMF includes monitoring, reporting and evaluation. At local level, the respective project management teams in the different agencies, local government and local communities will be responsible for monitoring to ensure that all required environmental and social mitigation measures for each project component are being implemented satisfactorily. Information collected from various stakeholders together with observations of project activities will be reported quarterly to MAAIF. Monthly monitoring reports will include:

- List of consultations held, including locations and dates, name of participants and occupations
- Main points arising from consultations including any agreements reached
- A record of grievance applications and/or grievances redress dealt with

- Monitoring data on environmental and safety parameters
- Trainings conducted

At national level, MAAIF will take overall responsibility for overseeing progress in implementing the ESMF and assessing the effectiveness of mitigation measures against agreed indicators and parameters. MAAIF will consolidate and review monthly reports submitted by the different agencies. The monitoring results shall be communicated to the World Bank.

MNP PROJECT AND ESMF IMPLEMENTATION

Institution	Responsibility and Safeguards Capacity for ESMF Implementation
MAAIF	**Responsibility** • MAAIF will be the main implementing unit of this project at national level, working in liaison with local governments in the respective districts. • Overall Project Coordination Unit (PCU) for MNP project • Oversight role and the implementation of mitigation measures and general compliance of the project with any permits, licenses and Approval Conditions and related regulations and standards on environment. • Report on matters of resolving complaints and grievances regarding the MNP activities by stakeholders **Capacity** - The Ministry does not have Environmental and Social management specialists. Given the fact that agricultural activities contribute cumulatively to environmental degradation in Uganda, there should be residential in-house capacity in MAAIF for environmental management. Under ACDP, MAAIF will recruit Environmental Specialist who will also be required to handle safeguard issues of MNP.
NEMA	**Responsibility** – review and approve environmental impact assessments as well as monitoring project implementation in accordance with the National Environment Act and the respective regulations. NEMA also issues Wetland Use Permits. **Capacity** – In general, NEMA is understaffed and constrained mainly due to the limited operational funds and monitoring agricultural activities of smallholder farmers will be a challenge. However, NEMA can monitor the pesticides use in MNP in selected schools and farmer groups through its Department of Environment Monitoring and Compliance in close collaboration with the respective District Environment Officers.
ACB	**Agricultural Chemicals Board under the MNP will include:** • Registration of new pesticides required under the project. • Licensing on new pesticides suppliers • Development of the project specific IPM Pesticides List • Work with MAAIF inspectors to enforce the pertinent laws **Capacity -** ACB has a low laboratory staff capacity with only one or two fully qualified staff and no laboratory equipment for assessing pesticides chemicals. In addition, the ACB is unable to regularly sit to assess the chemicals imported in the country and make decisions; and there are no regular field inspections and surveillance due to a limited budget.
MoH	**Responsibility** – the MNP will collaborate with Ministry of Health to collect and keep accurate statistics on pesticide poisonings events. In addition, it will create awareness raising actions that will target the different pesticide users in project area in order to avoid such

	accidents and incidents.
MoE	**Responsibility** – The Ministry of Education and Sports will be supported to manage the school demonstration gardens and relationship with parent farmers. In addition, it will create awareness raising actions that will target the different pesticide users in order to avoid accidents and incidents of pesticides pollution and poisoning.
UNBS	**Responsibility** – UNBS will work hand in hand with ACB, NDA, URA, NEMA and MAAIF to address issues of pesticides quality.
URA	**Responsibility** – URA will have to ensure that the fertilizers and pesticides imported to Uganda for the MNP meet standards as per guidance of the ACB, NDA and UNBS.
GAL	**Responsibility** – The Government Analytical Lab/Chemist in the Ministry of Internal Affairs (MIA) will play a role in inspection to verify via analysis the content of products sold to the public and to control adulteration. In addition, GAL and other laboratories will be useful in testing of samples to monitor pesticide contamination and food safety issues.
UCDA	UCDA will work together with MAAIF and NARO to ensure that extension services specifically for coffee are adequate and also to promote research as well as distribution of resistant varieties.
LGs	**Responsibility** – Work with MAAIF to implement the project within their respective jurisdictions. The Local Governments have District Environment Officers, District Agricultural Officers, District Community Development Officers and District Gender Officers, some of whom are involved in the current Bank Financed ATAAS and NUSAF-2 Projects. Sub-county extension staff shall also be involved in the implementation of safeguard policies. **Capacity** – Every district has a designated District Environment Officer whose responsibility is to monitor all environmental affairs of the district including compliance of activities with their jurisdiction. However, the districts will require facilitation to monitor project implementation as provided for in the ESMF budget.
NGOs	• Raise awareness among the smallholder farmers about the dangers of pesticide use; • Work with extension staff to teach farmers about safe pesticide use and storage; • Work with farmers to develop community monitoring of the use and impacts of pesticides in order to alert the authorities as to the health and environmental impacts of pesticide use; • Empower the smallholders through training and other support to engage with the local government to address their concerns on pesticides use; • Do more to publicize to the public the environmental and health impacts of pesticide use
World Bank	The World Bank will be responsible for review and clearance of ESIAs/Project Briefs as well as independently monitoring the project's environmental and social performance in relation to the respective safeguards through implementation support supervision missions. World Bank will also be responsible for reviewing regular monitoring reports and officially disclosing the ESIAs on its website. Technical guidance may also be provided by World Bank to MAAIF as needed from time to time.

8 ESMF BUDGET AND DISCLOSURE

8.1 ESMF Budget Components

Financial resources are required to support implementation of the ESMF. Below are estimates to successfully implement the ESMF for MNP.

ESMF Budget for MNP

Item	**Cost in USD**				
	Year 1	Year 2	Year 3	Year 4	Year 5
Mobilization and training in ESMF Safeguards requirements, use of pesticides and general project management including GRM issues coordination (targeted include implementing agencies and LGs)	40,000	30,000	20,000	20,000	20,000
Facilitation of LGs to mobilize farmers, create awareness and provide technical guidance	40,000	20,000	20,000	20,000	20,000
Annual Total	**80,000**	**50,000**	**40,000**	**40,000**	**40,000**
Total Budget Estimate for ESMF Implementation					**250,000**

8.2 ESMF Disclosure

This ESMF will be disclosed in compliance with relevant Ugandan regulations and the World Bank Operational Policies. It will be disclosed at the Info shop of the World Bank and will also be available to any interested persons. MAAIF will also provide copies of the respective ESIAs and RAPs or disclosure at the World Bank Info shop for public access and for public information and comments/feedback, if any.

9 CONCLUSIONS AND RECOMMENDATIONS

9.1 Conclusions

The objective of the proposed MNP is to increase production and consumption of micronutrient-rich foods and utilization of community-based nutrition services in smallholder households in project areas. Special attention will also be given to proactively ensure inclusion within project activities of farming households (and agribusiness firms) in which women and youth play a prominent role in the management of the farm (and/or agribusiness) enterprise.

This project will have several positive social impacts for people. MNP is expected to have significant positive impact on social and poverty conditions by increasing productivity and production the of selected commodities, promoting consumption of nutrient rich foods as well as focusing to reach and promote smallholding farmers. The process has been designed to ensure the inclusion of women and youth in the management of farms (and/or agribusiness) enterprises. Affirmative actions to include youth and women in activities will include, but not limited to training, financial access, land access and use (on the irrigation schemes), and access to inputs.

The MNP Projects has been assigned Environmental Category B. Some of the associated negative environmental and social impacts include poor handling and application of pesticides. Most of these

impacts are minor or of low-intensity, site-specific and thus relatively straight forward to manage, mainly based on sensitization activities, information dissemination, training and observance of safety practices while purchasing, transporting, storing and applying pesticides.

9.2 Recommendations

9.2.1 Need for an Environmental Liaison Unit in MAAIF

MAAIF does not have a unit dedicated to oversee environmental issues in the sector. This is of importance bearing in mind the nature of the sector's activities on the environment and a number of on-going interventions on agriculture which have varying impacts on the environment. As a long term measure and under ACDP, MAAIF has been recommended to establish an Environmental Liaison Unit (ELU) within its public service macro-structure whose mandate should be to mainstream environmental and social measures into the Ministry's plans, activities, policies and programmes. In the event that this unit is not set up, technical assistance shall be provided to MNP by hiring Environmental Consultant on a retainer basis.

9.2.2 Development of guidelines for pesticides use and management

Need to develop as part of the Projects Operational Manuals guidelines for use and disposal of pesticides is recommended. This will provide quick reference and guidance to the project implementers and beneficiaries on how to purchase/procure, transport, store, use, apply and safely dispose of pesticides related/resultant wastes.

9.2.3 Training and Sensitization on the use of Pesticides

Training on the use of pesticides and sensitization of all project participants and/or beneficiaries is strongly recommended in order to avert any negative impacts that may be associated with the use of pesticides.

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10 ANNEXES

10.1 Annex 1: Environmental and Social Screening Form

Please type or print clearly, completing this form in its entirety. You may provide additional information on a separate sheet of paper if necessary. Kindly note that the information you are to provide is required by Section 22 of the National Environment Act Cap 153.

Component under MNP	
Name of Subproject	
Project Objective	
Expected Commencement Date	
Proposed Main Project Activities	
Location (District, Parish, Village)	
Name of Evaluator	

BRIEF DESCRIPTION OF THE PROPOSED PROJECT

EMPLOYEES AND LABOURERS

Number of people to be employed: Employees and Labourers	During Construction	During Routine Operation
FULL-TIME		
PART-TIME		

DESCRIPTION OF PROCESS THAT COULD BE IMPLEMENTED

Briefly describe the type and nature or type of the project at the site.

List the type and quantity of raw materials to be used in the project and highlight their sources

Material	**Quantity**	**Source**

POTENTIAL ENVIRONMENTAL IMPACTS

Please indicate environmental impacts that may occur as a result of the proposed project.

A. The Biological Environment

The Natural Environment

Describe the habitats and flora and fauna in the project area and in the entire area expected to be affected by the sub-project (e.g., downstream areas, access roads):

_____

Will the project directly or indirectly affect:

Natural forest types?

swamps?

Wetlands (i.e., lakes, rivers, swamps, seasonally inundated areas)?

Natural critical habitats (parks, protected areas)?

Other habitats of threatened species that require protection under Ugandan laws and/or international agreements?
YES _____ NO _____

Are there according to background research/observations any threatened/ endemic species in the project area that could be affected by the project?
YES _____ NO _____

Will vegetation be cleared? If yes, please state the distance/length of affected area
YES _____ NO _____

Will there be any potential risk of habitat fragmentation due to the clearing activities?
YES _____ NO _____

Will the project lead to a change in access, leading to an increase in the risk of depleting biodiversity resources?
YES _____ NO _____

Provide an additional description for "yes" answers:
_____

Protected Areas
Does the subproject area or do subproject activities:

Occur within or adjacent to any designated protected areas?
YES _____ NO _____

Affect any protected area downstream of the project?
YES _____ NO _____

Affect any ecological corridors used by migratory or nomadic species located between any protected areas or between important natural habitats (protected or not) (e.g., mammals or birds)?

YES _____ NO _____

Provide an additional description for "yes" answers:
_____

Invasive Species
Is the sub-project likely to result in the dispersion of or increase in the population of invasive plants or animals (e.g., along distribution lines)?
YES _____ NO _____

Provide an additional description for a "yes" answer:
_____

B. The Physical Environment
Geology/Soils

Will slope or soil stability be affected by the project? YES _____ NO _____
Will the subproject cause physical changes in the project area (e.g., changes to the topography)? YES _____ NO _____

Will local resources, such as rocks, wood, sand, gravel be used?
YES ____ NO ____
Could the subproject potentially cause an increase in soil salinity in or downstream the project area? YES _____ NO _____

Could the soil exposed due to the project potentially lead to an increase in lixiviation of metals, clay sediments, or organic materials? YES _____ NO _____

Landscape / Aesthetics

Is there a possibility that the sub-project will adversely affect the aesthetics of the landscape?
YES _____ NO ____

Pollution
Will the sub-project use or store dangerous substances (e.g., large quantities of hydrocarbons)?
YES _____ NO _____

Will the subproject produce harmful substances? YES _____ NO _____
Will the subproject produce solid or liquid wastes? YES _____ NO _____
Will the subproject cause air pollution? YES _____ NO _____
Will the subproject generate noise? YES _____ NO _____
Will the subproject generate electromagnetic emissions? YES ____ NO _____
Will the subproject release pollutants into the environment? YES ____ NO ____

C. The Social Environment

Land Use, Resettlement, and/or Land Acquisition
Describe existing land uses on and around the sub-project area (e.g., community facilities, agriculture, tourism, private property, or hunting areas):

Are there any land use plans on or near the sub-project location, which will be negatively affected by subproject implementation? YES ____ NO ____

Are there any areas on or near the subproject location, which are densely populated which could be affected by the sub-project? YES _____ NO _____

Are there sensitive land uses near the project area (e.g., hospitals, schools)?
YES ____ NO____

Will there be a loss of livelihoods among the population? YES ____ NO ____

Will the sub-project affect any resources that local people take from the natural environment? YES _____ NO _____

Will there be additional demands on local water supplies or other local resources?
YES _____ NO _____

Will the sub-project restrict people's access to land or natural resources?
YES ____ NO ____

Will the project require resettlement and/or compensation of any residents, including squatters?
YES _____ NO _____

Will the subproject result in construction workers or other people moving into or having access to the area (for a long time period and in large numbers compared to permanent residents)?
YES ____ NO _____

Who is/are the present owner(s)/users of resources/infrastructures the subproject area?
_____

Loss of Crops, Fruit Trees, and Household Infrastructure
Will the subproject result in the permanent or temporary loss of:
Crops?
Fruit trees / coconut palms?
Household infrastructure?
Any other assets/resources?

Occupational Health and Safety, Health, Welfare, Employment, and Gender
Is the sub-project likely to safeguard worker's health and safety and public safety (e.g., occupational health and safety issues)? YES _____ NO _____

How will the project minimize risk of HIV/Aids?

How will the sub-project minimize the risk of accidents? How will accidents be managed, when they do occur?
_____
Is the project likely to provide local employment opportunities, including employment opportunities for women? YES _____ NO _____

Provide an additional description for "yes" answers:
_____

Historical, Archaeological, or Cultural Heritage Sites

Based on available sources, consultation with local authorities, local knowledge and/or observations, could the sub-project alter:

Historical heritage site(s) or require excavation near the same? YES ____ NO _____

Archaeological heritage site(s) or require excavation near the same? YES ____ NO ____
Cultural heritage site(s) or require excavation near the same? YES _____ NO ____

Graves, or sacred locations (e.g., fetish trees or stones) or require excavations near the same?
YES _____ NO _____

N.B For all affirmative answers (YES) Provide description, possible alternatives reviewed and/or appropriate mitigating measures.

RECOMMENDATIONS

Environmental category: (tick where applicable)

	Category	**Justification**
	Does not require further environmental or social studies	
	Requires submission of only a Project Brief	
	Requires a full ESIA to be submitted on date	
	Requires an ESMP to be submitted on date	
	Requires a RAP to be submitted on date	
	Requires an Indigenous Peoples Plan (IPP)	
	Requires a Physical Cultural Resources Plan	

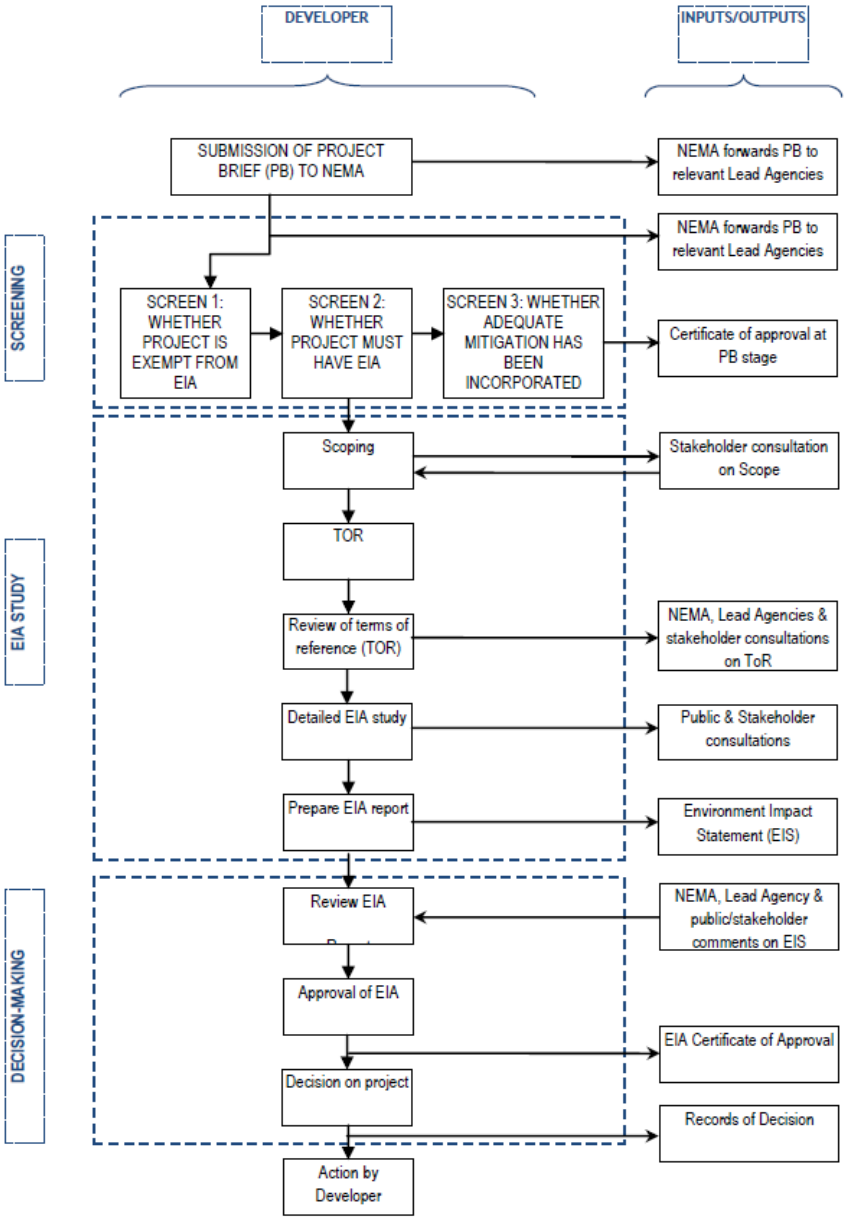
CERTIFICATION

We certify that we have thoroughly examined all the potential adverse effects of this subproject.
Reviewer: ……
Name: ……..
Signature: …….
Date: …….

10.2 Annex 2: Detailed ESIA Process in Uganda

Overview

The ESIA guidelines (NEMA 1997) and the ESIA regulations (NEMA 1998) recognize the following stages in an ESIA process: Project Brief formulation; Screening; Environmental impacts study; and Decision making. In addition public consultation is required throughout the ESIA process.



(Source: EIA Guidelines for Uganda 1997)

The EIA process in Uganda is described is initiated by the submission of a project brief – a document that contains the same sorts of information that are in the ESSF and a format for which is contained in the EIA guidelines. Once the information is judged to be complete, NEMA requests comments from the lead agency and then screens the project. The Executive Director has three

options: (a) approve the proposed project, if the EIA is not mandatory and the project brief includes adequate mitigation measures, or (b) request the developer to prepare an Environmental and Social Impact Study (ESIS) if a decision cannot be made on the basis of the project brief. If MAAIF has ascertained that the project is on the mandatory ESIA list, NEMA state that the project brief stage is normally omitted, moving straight into the ESIA process. If the decision is for an ESIS, the proponent obtains NEMA approval of the proposed ESIA consultant, conducts a scoping exercise, and agrees with NEMA on the study terms of reference. The study is conducted, and culminates in submission of an Environmental Impact Statement (ESIS) to NEMA for review and decision. Stakeholder consultation is mandatory at scoping, Terms of Reference preparation, during the environmental study, and preparation of the draft Environmental and Social Impact Statement (ESIS). The content of an ESIS, as specified in the EIA regulations, covers the recognized elements of environmental and social assessment good practice, including consideration of technical and site alternatives and induced and cumulative impacts.
The EIA Regulations (First Schedule) list the issues to be considered in an EIA, including:

- Biodiversity
- Ecosystem maintenance
- Fragile ecosystems
- Social considerations including employment generation, social cohesion or disruption, immigration or emigration, local economy
- Effects on culture and objects of cultural value
- Visual impacts

Preparation of Project Brief
According to the National Environment Act, "project brief" means a summary statement of the likely environmental effects of a proposed development referred to in section 19 of the Act. Unlike the ESIA, a project brief does not require a scoping report and neither submission of terms of reference for approval by NEMA. According to Regulation 5 of the ESIA Regulations, 2006, a Project Brief is supposed to contain the following:

- the nature of the project in accordance with the categories identified in the Third Schedule of the Act;
- the projected area of land, air and water that may be affected;
- the activities that shall be undertaken during and after the development of the project;
- the design of the project;
- the materials that the project shall use, including both construction materials and inputs;
- the possible products and by-products, including waste generation of the project;
- the number of people that the project will employ and the economic and social benefits to the local community and the nation in general;
- the environmental effects of the materials, methods, products and by-products of the project, and how they will be eliminated or mitigated;
- Any other matter which may be required by the Authority.

If the Executive Director is satisfied that the project will have no significant impact on the environment, or that the Project Brief discloses sufficient mitigation measures to cope with the anticipated impacts he may approve project. The Executive Director of NEMA or his delegated official shall then issue a Certificate of Approval for the project. However, if the Executive Director finds that the project will have significant impacts o the environment and that, the Project

Brief does not disclose sufficient mitigation measures to cope with the anticipated negative impacts, he shall require that, the developer undertakes an ESIA for the planned project.

Environmental Screening

The purpose of screening is to assist categorize the type of ESIA required for the project i.e. does it require a full ESIA, a Project Brief or no ESIA at all is required. This is important to enable the application of the appropriate ESIA level based on the project's anticipated levels of significant impacts as elaborated in the National Environment (EIA) Guidelines 1997.

Scoping and Preparation of ToRs

Scoping is the initial step in the ESIA process. Its purpose is to determine the scope of work to be undertaken in assessing the environmental impacts of the proposed project. It identifies the critical environmental impacts of the project for which in-depth studies are required, and elimination of the insignificant ones. The scoping exercise should involve all the project stakeholders so that consensus is reached on what to include or exclude from the scope of work. It is also at this stage that project alternatives are identified and taken into consideration. The contents of the scoping report are the same as the project brief; however, more detail is likely to be needed. This may involve some preliminary data collection and fieldwork. The Developer takes the responsibility for scoping and prepares the scoping report after consultation with NEMA, Lead Agencies and other stakeholders. The developer with assistance from technical consultants will draw up the ToRs for the ESIS and submit a copy to NEMA that shall in turn be forwarded to Lead Agencies for comments, in this case including the District Environment Officer.

Preparation of the ESIS

In preparing an ESIS, relevant information is collected on issues of real significance and sensitivity. These are then analyzed, mitigation measures developed for the adverse impacts and compensatory measures recommended for unmitigated environmental impacts. Measures aimed at enhancing beneficial or positive impacts are also given. An ESIS documents the findings and is submitted to NEMA by the developer.

Review of ESIS and Decision on Project

The Developer is required to submit ten (10) copies of the ESIS to NEMA for review and approval. NEMA then forwards a copy to the Lead Agencies for comments. NEMA in consultation with the Lead Agencies shall review the contents of the ESIS, paying particular attention to the identified environmental impacts and their mitigation measures, as well as the level of consultation and involvement of the affected stakeholders in the ESIS process. In this review, the level to which the ToRs set out for the study is addressed shall be considered. In making a decision about the adequacy of the ESIS, NEMA shall take into account the comments and observations made by the Lead Agencies, other stakeholders and the general public. NEMA may grant permission for the project with or without conditions, or refuse permission. If the project is approved, the Developer will be issued a Certificate of Approval.

Environmental and Social Management Plan

The Environmental and Social Management Plan (ESMP) is intended to ensure efficient management of environmental and social issues in subprojects. The ESMP consists of:

- The relevant project activities,
- The potential negative environmental and social impacts,
- The proposed mitigating measures,

- The institutions responsible for implementing the mitigation measures,
- The institutions responsible for monitoring the implementation of the mitigation measures and the frequency of the afore-mentioned measures;
- Capacity building needs and
- The cost estimates for these activities.

In cases where the MNP is likely to have sub-projects which are small in nature without significant environmental impacts, an ESMP will be prepared and will outline specific actions to mitigate these impacts and conforming to the obligations stipulated in the screening exercises, and all legal instruments in force. At the time of the implementation of the sub-projects, the potential environmental and social impacts must be clearly identified and a management plan formulated, implemented and the plan's performance monitored during and after execution of sub-project activities. The impacts must be avoided or neutralized where possible or mitigated in conformity with Uganda's and the World Bank's prescriptions for sound environmental management.

Environmental Management and Monitoring Plan

Monitoring is the continuous and systematic collection of data in order to assess whether the environmental objectives of the project have been achieved. Good practice demands that procedures for monitoring the environmental performance of proposed projects are incorporated in the ESIS. Monitoring provides information on the occurrence of impacts. It helps identify how well mitigation measures are working, and where better mitigation may be needed. The monitoring program should identify what information will be collected, how, where and how often. It should also indicate at what level of effect there will be a need for further mitigation. How environmental impacts are monitored is discussed below.

- Responsibilities in terms of the people, groups, or organizations that will carry out the monitoring activities be defined, as well as to whom they report amongst others. In some instances, there may be a need to train people to carry out these responsibilities, and to provide them with equipment and supplies;
- Implementation Schedule, covers the timing, frequency and duration of monitoring are specified in an implementation schedule, and linked to the overall sub project schedule;
- Cost Estimates and Source of resources for monitoring need to be specified in the monitoring plan;
- Monitoring methods need to be as simple as possible, consistent with collecting useful information, so that the sub project implementer can apply them.
- The data collected during monitoring is analyzed with the aim of:
- Assessing any changes in baseline conditions;
- Assessing whether recommended mitigation measures have been successfully implemented;
- Determining reasons for unsuccessful mitigation;
- Developing and recommending alternative mitigation measures or plans to replace unsatisfactory ones; and
- Identifying and explaining trends in environment improvement or degradation.

Public Consultation

The environmental impacts or effects of a project will often differ depending on the area in which it is located. Such impacts may directly or indirectly affect different categories of social groups, agencies, communities and individuals. These are collectively referred to as project stakeholders or

the public. It is crucial that during the ESIA process, appropriate mechanisms for ensuring the fullest participation and involvement of the public are taken by the developer in order to minimize social and environmental impacts and enhance stakeholder acceptance. An effective consultation process should generally ensure that:

- The public has a clear understanding of the proposed project; and
- Feedback mechanisms are clearly laid out and known by parties involved.

Different stages of the ESIA process require different levels of public consultation and involvement. The key stages are:

- Public consultation before the commissioning of the ESIS;
- Public consultation during the ESIS; and
- Public consultation during ESIS review.

Consultation can be before, during the ESIA study or during its review as outlined below:

Consultation before the ESIA

On submission of the project brief to NEMA, it might be decided that views of the public on the project are sought. NEMA is obliged to publish the developer's notification and other relevant documents in a public notice within 4 weeks from the date of submission of the project brief and/or notice of intent to develop. It is important therefore, that a plan for stakeholder involvement is prepared before the ESIS begins. Such a plan should consider:

- The stakeholders to be involved;
- Matching of stakeholders with approaches and techniques of involvement;
- Traditional authority structures and political decision-making processes;
- approaches and techniques for stakeholder involvement;
- Mechanisms to collect, synthesize, analyze and, most importantly, present the results;
- To the ESIS team and key decision-makers;
- Measures to ensure timely and adequate feedback to the stakeholders; and
- Budgetary/time opportunities and constraints.

Pubic consultation during the ESIS

During the ESIS, the study team should endeavor to consult the public on environmental concerns and any other issues pertaining to the project. Though consultations are very critical at the scoping stage, ideally, it should be an on-going activity throughout the study. During the ESIS review, the public is given additional opportunity for ensuring that their views and concerns have been adequately addressed in the ESIS. Any earlier omissions or oversight about the project effects can be raised at this stage. To achieve this objective, the ESIS and related documents become public after submission to NEMA. An official review appointment will be announced, where the reviewing authority has to answer questions and remarks from the public. These questions have to be handed in writing prior to the meeting.

10.3 Annex 3: Projects which are likely to be exempted from EIA Process (List A, Annex 2 of Uganda EIA Guidelines)

The following list identifies those projects which are normally exempt from the EIA process. The characteristics and anticipated physical effects of each project should be carefully considered when or if they are exempted from further steps of the EIA Process, to ensure development and implementation of an acceptable ESMP where necessary, and which is most likely for MNP:

- ***Clearing and farm construction for individual subsistence small farms.***
- Construction or repair of individual houses.
- Minor land use changes in areas with slopes less than 20% including housing construction.
- Information collection (scientific or educational) except if it involves use of chemicals or endangered species or alien materials.
- Transfer of ownership of land or related facilities so long as the general character of the area is not changed.
- Environmental enforcement actions.
- Emergency repairs to facilities within the character of its surroundings.

10.4 Annex 4: Generic Summary of the Environmental and Social Management Plan , Pest Management & Monitoring Plan, and Pesticides Management & Monitoring Plan for MNP

Environmental and Social Management Plan

Project Component	Project Activities	Project Impacts	Mitigation Measures	Project Phase	Surveillance		Mitigation Cost (USD)
					Responsible Entity	Frequency	
Component 1: Agriculture inputs under Component 1 for MNP	• Purchase, transportation, distribution and use of agricultural inputs	• Pollution from agro chemicals, • Occupational Health and Safety	• Operationalization of PMP prepared as part of this ESMF • Use of appropriate PPE	Implementation	MAAIF, DLGs, MoH	Monthly	Budgeted under overall ESMF budget

Pest Management and Monitoring Plan

Potential Impacts and Risks	Mitigation Measures	Implementation tool	Expected result	Monitoring indicators	Responsibility
Threat from other crop pests and diseases	Educate and train farmers to adopt good agricultural practices (GAP)	Adoption of IPM techniques/ approaches	Farmers trained in IPM techniques and GAP	1. Number of farmers trained, Training records 2. Incidence of crop pests 3. Production losses from crop pests	UCDA, NAADS, MAAIF, DLGs
	Apply ACB approved or recommended pesticide if necessary	Inspection of pesticides at farm/storage gate prior to use (Project Policy)	Applied pesticides registered and approved by key stakeholders and in conformity with IPM principles	Records of pesticides applied at each farm	UCDA, MAAIF, NAADS, DLGs
Impact on post harvest losses due to pests	1. Provide adequate and proper storage facilities	Post-harvest loss reduction plan based on IPM techniques in place	a.) Post harvest losses avoided or minimized b) Applied pesticides registered and	Number of farmers trained in IPM techniques for post harvest storage; Number and condition of storage facilities in use	MAAIF, NAADS, UCDA, DLGs

	2. Monitor incidence of post-harvest pests		approved by key stakeholders and in conformity with IPM principles	Number of cases of post harvest pests	UCDA, NAADS, MAAIF, DLGs
	3. Confirm status and integrity of pesticides at storage gate prior to use	Inspection of pesticides at farm/storage gate prior to use (Project Policy)		Records of pesticides applied at storage sites/ rooms	NAADS, MAAIF, DLGs

Pesticides Management and Monitoring Plan

Potential Impacts and Risks	**Mitigation Measures**	**Implementation tool**	**Expected result**	**Monitoring indicators**	**Responsibility**
Improper use of pesticides by farmers and extension staff	Educate farmers and extension staff on proper use of pesticides and pesticide use hazards including use of PPE.	Pesticide hazards and use guide manual or leaflet for the project (include simple pictorial presentations)	Proper use of pesticides by farmers and farm assistants	Number of cases of pesticide poisoning occurring under the project	MAAIF, DLGs
	Control and supervise pesticide use on farms	Adoption of IPM approaches/ techniques	Farmers trained in IPM techniques	Number of farmers trained, Training records	MAAIF, DLGs
	Monitor pesticide residue in crops	Random sampling procedure for crops and storage products	Pesticide residue in crops within acceptable limit/MRL	1. Levels and trend of pesticide residue in sampled crops 2. Number of times exported crops are rejected due to pesticide residues	MAAIF, DLGs
Pollution of water resources and aquatic life	Control and supervise pesticide use by farmers	Adoption of IPM approaches/ techniques	Farmers trained in IPM techniques	Number of farmers trained, Training records	MAAIF, DLGs
	Proper disposal of pesticide containers by resellers/farmers	Pesticide container collection and disposal plan	Pesticide container disposal plan developed and implemented	1. Number of farmers/ resellers aware of pesticide container disposal plan 2. Number of containers collected	MAAIF, DLGs
	Monitor pesticides in water resources	Environmental quality monitoring plan (linkage with Project ESMP)	Pesticide concentration in water resources (boreholes, streams etc.)	Levels of pesticides in water resources	NEMA, GAL, MAAIF, DLGs

Abuses in pesticide supply and sales	Identify all pesticide distributors and resellers interested in providing services and products to farmers under the Project	Registration policy for all interested distributors and resellers under project	Only approved and licensed dealers and resellers supply pesticides under project	a) Company registration documents b) Evidence of license/permit to operate in pesticides c) Evidence of location and contacts of suppliers/resellers	ACB, UNBS, MAAIF, DLGs
	Confirm status and integrity of pesticides supplied under project Ban big pesticide containers to minimize decanting cases	a.) All pesticides are to be in the original well labeled pesticide containers prior to use b.) No decanting of pesticides under this project c) Inspection of pesticides at farm gate prior to use Decanting policy (No decanting of pesticides under project)	a) Only approved and registered pesticides used under project b)Banned pesticides avoided c) Fake and expired pesticides avoided d) Integrity of pesticide guaranteed at farm gate level All pesticides delivered for use are in the original containers	a) List of pesticides supplied and used in line with Agricultural Chemicals Board b) Cases of pesticides found in non-original containers c) Inspection records for pesticides at farm gate prior to use Cases of pesticides found in non-original containers	ACB, MAAIF
Poisoning from improper disposal of pesticide containers	1. Educate farmers, extension staff and local communities on health hazards associated with use of pesticide containers	1. Pesticide hazards and use guide manual or leaflet for the project	Farmers, extension staff, local communities educated on pesticide health hazards	Number of cases of pesticide poisoning through use of pesticide containers; Number of farmers returning empty pesticide containers at collection points; Number of farmers, extension staff, and resellers trained in proper cleaning of pesticide containers	DLG, NEMA, MAAIF, DLGs, MoH
	2. Properly dispose pesticide containers	2. Pesticide container cleaning and disposal plan	Pesticide container cleaning and disposal		
General health and safety of farmers/crops and environmental hazards	Educate farmers to adopt Best Practices based upon IPM techniques; and do not use chemical pesticides unless advised by MAAIF	IPM techniques with emphasis on cultural and biological forms of pest control	Compliance with national laws and WB policy on Pest/ pesticide management	Number of farmers trained in IPM techniques; Number of farmers implementing IPM on their farms Frequency of chemical pesticides usage	MAAIF, DLGs, MoH

	Provide PPEs to farmers/extension staff for pesticide use in the fields	Health and safety policy for farm work	Farmers and accompanying dependants (children) protected against pesticide exposure in the fields	Quantities and types of PPEs supplied or made available under the project	MAAIF, DLGs
	Educate farmers/ farm assistants in the proper use of pesticides	Pesticide hazards and use guide manual or leaflet for the project (include simple pictorial presentations)	Farmers know and use pesticides properly; pesticide hazards and use guide leaflet or flyers produced.	Number of farmers trained in pesticide use; Number of farmers having copies of the pesticide hazard and use guide flyers;	MAAIF, DLGs
	Properly dispose obsolete and unused pesticides	Obsolete and unused pesticide disposal plan	obsolete and unused pesticide disposal plan prepared and implemented	Relationship between pesticide supply and usage	MAAIF, NEMA, DLGs
	Educate farmers to obtain or purchase quantities of pesticides required at a given time and to avoid long term storage of pesticides	Pesticide use policy/plan	Only pesticides needed are purchased; long term storage of pesticides by farmers avoided	Relationship between pesticide supply and usage	MAAIF, DLGs
	Provide emergency response to pesticide accidents and poisoning	Emergency response plan	Pesticide accidents and emergencies managed under the project	Number of pesticide accidents and emergencies	MAAIF, DLG, DLGs, MoH