



FAO/GLOBAL ENVIRONMENT FACILITY
PROJECT DOCUMENT



PROJECT TITLE: Pesticide Risk Reduction in Malawi (FSP)

PROJECT SYMBOL: GCP /MLW/052/GFF

Recipient Country: Malawi

Resource Partner: Global Environment Facility

FAO project ID: 616334

GEF Project ID: 5109

Executing Partner(s): Ministry of Agriculture, Irrigation and Water Development

Expected EOD (starting date): 1 January 2015

Expected NTE (End date): 31 December 2017

Contribution to Strategic Objective 2: Increase and improve provision of goods and
FAO's services from agriculture, forestry and fisheries in a sustainable
Strategic Framework manner

GEF Focal Area: Chemicals (Persistent Organic Pollutants – POPS)

GEF Strategic Objectives: CHEM-1 Outcome 1.4 POPs waste prevented, managed and disposed of, and POPs contaminated sites managed in an environmentally sound manner

Environmental Impact Assessment Category: B

Financing Plan: GEF allocation (in USD):	2,550,000
<u>Co-financing (in USD):</u>	
Crop Life International (Grant)	1,250,000
CropLife International (In Kind)	50,000
SelfHelp Africa (Grant)	1,158,359
Pesticides Control Board (In-kind)	1,113,854
Malawi Bureau of Standards (In Kind)	350,000
Environmental Affairs Department (In Kind)	360,000
Government of Malawi (In-kind)	380,000
Government of Malawi (Grant)	2,243,000
FAO (In Kind)	400,000
FAO (Grant)	4,574,161
Subtotal Co-financing:	11,879,374
Total Budget:	14,429,374

Executive Summary

Agriculture not only contributes over 30 percent of Growth Domestic Product (GDP), but also accounts for 80 percent of Malawi's foreign exchange earnings. With 85 percent of the population residing in the rural areas, agriculture employs over 80 percent of the country's workforce, especially women and youth and also contributes to national and household food and nutrition security. Malawi's population currently stands at 16 million but is projected to reach 20.8 million by 2020 with the overall national population density exceeding 220 persons/km². The country faces several challenges in its quest to intensify agricultural production to meet demand for food, feed and fibre and to meet the quality standards commanded in international trade and these lack of sound pesticide management.

Pesticide use is likely to rise under intensification of agricultural production to meet the demands of a growing human population and with intensified efforts to manage malaria vectors particularly with likely increases of the pest burden associated with climate change. Sound pest and pesticide management would significantly contribute to attainment of national food and nutrition security, improve on natural resource management and public health. Pesticide management in Malawi is fraught with problems at all stages of the pesticide life cycle from importation through to disposal. This has resulted in accumulation an inventoried 382 tonnes of obsolete pesticide stocks including POPs (and contamination of some pesticide storage sites), posing significant risks to human health and the environment. The present procurement of pesticides by Government under the Farm Input subsidy Scheme (FISP), central procurement for migratory pest control stock and heavy use across the agricultural sector does not only generate substantial amounts of empty containers, but also presents a great potential source of obsolete pesticides. As a result of a weak legislative framework and poor post registration enforcement, illegal vending is rampant and the problem is exacerbated by porous borders resulting in an influx of unauthorised products from neighbouring countries.

Malawi has made significant inroads through various initiatives aimed at reducing pesticide risks. These include passing of the Pesticide Act 2000 and subsequent creation of the Pesticides Control Board, ratification of the Basel, Rotterdam and Stockholm Convention and subsequent development of the National Implementation Plan for the Stockholm Convention; the Crop Life Clean Farms project and the FAO TCP to strengthen pest and pesticide management capacities in Malawi. The project seeks to build on these initiatives and incorporate new design modifications drawing on lessons learnt from past programs.

The objective of the project is to dispose of the inventoried 380t of obsolete pesticides including POPs and to remediate at least one contaminated site and to strengthen the legislative and institutional capacity for sound life cycle management of pesticide in order to safeguard against future accumulation. The project has been structured into four technical components. The specific objectives of the technical components are to: dispose of existing obsolete pesticides including POPs and remediate pesticide-contaminated sites (Component 1); implement a sustainable national system of management of empty pesticide containers (Component 2); strengthen the legislative and institutional framework; specifically strengthening the Pesticide Control Board's regulatory capacity to ensure sound management of pesticides (Component 3); and to promote the adoption of alternatives to chemical pesticides on key crops, namely cotton, vegetables (tomato and brassica) and maize and the development of a communication strategy to promote IPM and raise awareness on pesticide risk (Component 4). These four components will be supported by horizontal project Monitoring & Evaluation (Component 5), Project Management (Component 6).

Institutional and implementation arrangements for this project are based on the mandates and experience of key institutions involved in the management of pesticides in Malawi and are as agreed at both the PPG inception and validation workshops. The Ministry of Agriculture and Irrigation (MoAI), Pesticides Control Board (PCB) will be the lead executing agency hosting the Project Management Unit (PMU) staffed by appointed part time Chief Technical Advisor, full time Project Coordinator and Administration Assistant and responsible for the coordination and management of project activities. PCB which will also chair the Project Steering Committee (PSC). The Ministries of Environment and Health, Justice as well as Trade will also be fully involved in project execution.

The project will work with a number of NGO and private sector partners who will contribute to the execution of specific components. The partners will be part of component task teams set-up to enhance engagement of key stakeholders, to access a variety of skills needed to implement the components, and to capitalize on resources, networks and channels of communication already established.

FAO will be the GEF Agency responsible for the supervision and provision of technical guidance during the implementation of the project. The project has a duration of three years and a budget of USD14, 429,373 of which USD2, 550,000 is GEF financing and 11,879,373 USD co-financing.

GLOSSARY OF ACRONYMS

ACP MEA	African Caribbean Pacific countries EC funded Multilateral Environmental Agreements project executed by FAO
ADD	Agricultural Development Division
AGP	Plant Production and Protection Division of FAO
APPSA	Agricultural Productivity Programme for Southern Africa
ASP	African Stockpiles Programme
ASWAp	Agriculture Sector Wide Approach Programme
AU	African Union
AWP/B	Annual Work Plan and Budget
BH	Budget Holder
CA	Conservation Agriculture
CABI	Centre for Agricultural Biosciences International
CAADP	Comprehensive African Agricultural Development Programme
CAMA	Consumer Association of Malawi
CDT	Cotton Development Trust
CEO	Chief Executing Officer (GEF)
CLI	Croplife International
CSA	Climate Smart Agriculture
CSM	Conceptual Site Model
CTA	Chief Technical Advisor
CPF	Country Programming Framework
DAES	Department of Agricultural Extension Services
DARS	Department of Agricultural Research Services
DCD	Department of Crop Development
DNA	Designated National Authority (under Rotterdam Convention)
EA	Environmental Assessment
EAD	Environmental Affairs Department
ECM	Empty Container Management
EMP	Environmental Management Plan
EMTK	Environmental Management Toolkit (obsolete pesticides management)

EP	Executing Partner
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer Field School
FICA	Flanders International Cooperation Agency
FISP	Farm Input Subsidy Programme
FPMIS	Field Project Management Information System
FUM	Farmers' Union of Malawi
GAP	Good Agricultural Practices
GBV	Gender Based Violence
GDP	Gross Domestic Product
GEBs	Global Environmental Benefits
GEF	Global Environment Facility
GEFSEC	GEF Secretariat
GLCC	Great Lakes Cotton Company
GoM	Government of Malawi
HIV AIDS	Human Immunodeficiency Virus-Acquired Immuno Deficiency Syndrome
HHP	Highly Hazardous Pesticide
icipe	International Centre for Insect Physiology and Ecology
JFFLS	Junior Farmer Field and Life Schools
IFAD	International Fund for Agricultural Development
ICT	Information, Communications and Technology
IPPC	International Plant Protection Convention
IPM	Integrated Pest Management
IPPM	Integrated Production and Pest Management
KPA	Key Priority Area
LEGN	FAO Development Law Service
LoA	Letter of Agreement
LTO	Lead Technical Officer
LTU	Lead Technical Unit
MBS	Malawi Bureau of Standards
MEAs	Multilateral Environmental Agreements

MDG	Millennium Development Goals
MoAIWD	Ministry of Agriculture, Irrigation and Water Development
MoECC	Ministry of Environment and Climate Change
MoH	Ministry of Health
MoTI	Ministry of Trade and Industry
MoU	Memorandum of Understanding
MRA	Malawi Revenue Authority
M&E	Monitoring and Evaluation
NASFAM	National Smallholder Farmers' Association of Malawi
NGO	Non-Governmental Organization
NIP	National Implementation Plan (Stockholm Convention)
NPPO	National Plant Protection Organization
OP	Obsolete Pesticides
PIF	Project Identification Form (GEF)
PIR	Project Implementation Review
PMU	Project Management Unit
POPs	Persistent Organic Pollutants
PPG	Project Preparation Grant (GEF)
PPR	Project Progress Report
PRODOC	Project Document
PSC	Project Steering Committee
PSMS	Pesticides Stock Management System
PY	Project Year
SCPI	Sustainable Crop Production Intensification
SEPS	Sustainable Environmental Protection System
SFFRFM	Small Holder Farmers Fertilizer Revolving Fund Central (Temporary Storage Facility)
STAP	Scientific and Technical Advisory Panel
TCI	Investment Centre Division (FAO)
TCP	Technical Cooperation Programme
TOR	Terms of Reference
USD	United States Dollar

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1 RELEVANCE

1.1 GENERAL AND POLICY CONTEXT

a) General Context

Malawi is the smallest but most densely populated country in Southern Africa with a population density of 139 persons/km² as a result of a rapid population growth of 2.8 percent per annum. Agriculture is the mainstay of Malawi's economy and remains the main source of growth and exports for the nearly 16 million inhabitants. With 85 percent of the population residing in the rural areas, agriculture employs over 80 percent of the country's workforce, especially women and youth. The sector contributes over 30 percent of Growth Domestic Product (GDP), and about 80 percent to foreign exchange earnings.

Despite the importance of agriculture to meet the national food demand and foster economic growth, the sector is hampered by several challenges that include suboptimal production practices, climate change, and environmental degradation of natural resources. As a result, 2 million people (13% of the population) currently face severe food insecurity.

Crop production has two main sub sectors: (i) the smallholder sub-sector with landholdings averaging 0.5 to 1 ha producing mainly maize, cotton, pulses and rice which represents about 65% of the GDP and (ii) the estate sub-sector cultivating high value cash crops like tobacco, coffee, tea and sugar that contributes the remaining 35% of the GDP originating from the agricultural sector. The small land holdings are generally rainfed, characterised by low soil fertility and poor drainage systems. The current land and crop management practices, having primarily an exploitative nature, tend to undermine the inherent resilience of farming systems to natural shocks like droughts, floods, and pest outbreaks. These shocks have been increasing in frequency and magnitude mainly due to the effects of climate change. High population growth puts a further pressure on this type of agriculture to expand production onto marginal and less fertile lands, particularly in the densely populated Southern districts. The estate sector represents a more intensive, high input agriculture oriented towards the commodity market.

Pests and diseases annually take a heavy toll on the crops, accounting for significant crop losses estimated at an average 40% and occasionally up to 100%¹. Pesticide use is highest on major cash crops (tobacco, tea, sugarcane, coffee and cotton). However following invasion by the Larger Grain Borer (*Prostephanus truncatus*) which can cause yield losses of up to 40% in stored maize, there has been an upsurge in use of chemical grain protectants in Malawi. Among the smallholder crops, vegetables are grown with a high use of highly hazardous products.

Pesticide management in Malawi is fraught with problems at all stages of the pesticide life cycle from importation through to disposal. Malawi is a net importer of pesticides, with only one local formulator specialising in dust formulations. Nearly all pesticides are therefore imported as products ready for use distributed to users by a large network of local dealers. Illegal import and vending is rampant and the problem is exacerbated by porous borders resulting in an influx of unauthorised products from neighbouring countries. Highly hazardous pesticides are readily available to unlicensed dealers and untrained users. Centralized government procurement, poor stock

¹ Kamanula *et al* 2011. Farmers' insect pest management practices and pesticidal plant use in the protection of stored maize and beans in Southern Africa. International Journal of Pest Management Vo1 57 (1) 41-49.

management, inaccurate assessment of needs, and weak import and regulatory controls have resulted in accumulation of significant quantities of obsolete pesticide stocks including POPs and contamination of some pesticide storage sites, posing significant risks to human health and the environment.

Pesticide use is likely to rise under intensification of agricultural production to meet the demands of rising human population and with intensified efforts to manage malaria vectors particularly with likely increases of the pest burden associated with climate change. Most studies have concluded that insect pests and diseases will generally become more abundant with global warming¹. Enhanced efforts should therefore be implemented to promote sustainable pest and pesticide management in tune with protecting, sustaining and restoring the health of people, communities and ecosystems. Capacities in pest and pesticide management systems in Malawi therefore need to be strengthened to deal adequately with pests, and to reduce human health and environmental risks associated with pesticides.

b) Legal, policy and institutional context

Malawi strives to follow the International Code of Conduct on Pesticide Management and has ratified the Basel, Rotterdam and Stockholm Conventions. Malawi submitted its National Implementation Plan (NIP) to the Secretariat of the Stockholm Convention in 2005 and is currently in the process of updating the NIP. The country is also party to the International Plant Protection Convention (IPPC) and the country recognizes that preventing the spread of pests saves crops and reduces the need to use pesticides.

The mandate for management of agricultural pesticides in Malawi rests with the MoAI through the Pesticide Control Board (PCB) established in 2000. PCB is responsible for the importation, exportation, manufacture, distribution, storage, disposal, sales, repackaging and use of all pesticides. Other responsibilities include registering pesticides, maintaining a register of pesticides, issuing of certificates and permits. There are a number of other government agencies involved in the regulation and management of chemicals in general, and implementation of international conventions ratified by the country. These include the Ministry of Health, Environmental Affairs Department (EAD) in the Ministry of Environment and Climate Change (MoCC) and the Ministry of Trade and Industry (MoTI) through the Malawi Bureau of Standards (MBS) and Malawi Revenue Authority (MRA) in the sampling and inspection of products at entry points respectively.

The Ministry of Health, through the Directorate of Epidemiology and Vector control registers public health pesticides. The Department of Environmental Affairs in the Ministry of Natural Resources, Energy and Environment is the focal point for the Stockholm, Basel, and Rotterdam Conventions. The EAD is responsible for the development and enforcement of regulations related to the management of hazardous waste including obsolete pesticides and empty containers. MoTI works in close collaboration with the PCB in issuing business licences regarding selling of pesticides.

The most specific piece of legislation controlling the use of pesticides in Malawi is the Pesticides Act 2000 (cap 35:04 of the Laws of Malawi-Act number 12 of 2000), the Pesticides Regulations, 2002 made pursuant to section 53 of the Pesticides Act by the Minister of Agriculture and Irrigation

¹ Phalike, B.R. 2007. Relationship between pesticide use for crops and climate change. Agriculture and Environmental Change

(MAoI). This Act is concerned with control of import, export, manufacture, distribution, storage and disposal of Pesticides and is the main piece of legislation in Malawi dealing with pesticides.

It is important to note that In 2007, the Government has launched a Farm Input Subsidy Programme (FISP) which include pesticides for storage grains and cash crops (e.g. cotton). Centralised purchase and distribution of pesticides to farmers is also operated by cotton companies under contract farming.

1.2 RATIONALE

a) Issues to be addressed

The current pesticide management in Malawi still falls short of compliance to standards stipulated in the key international chemical conventions. Pesticide risks may be heightened by heavy pest pressure as a result of climate change and increased chemical use as the country intensifies agricultural production to match increasing demand for food arising from rapid population growth. As such pesticides continue to pose high risks to the environment and human health unless interventions are made to address the weaknesses that exist in the life cycle management of pesticides.

Pesticide legal and policy framework: While Malawi has some legislation in place for pesticide management; there are gaps in the regulations for sound life cycle management (for transportation, illegal trade, disposal of used or empty containers, control of pollution and disposal of pesticide waste). A comprehensive and robust regulatory framework would form the cornerstone for sound life cycle pesticide management for Malawi. Since 2007, the country pursued the Input Subsidy Program (ISP) which central procurement and distribution (on credit or otherwise) to cotton farmers and for post-harvest treatment of maize. The current inclusion of pesticides in the ISP invariably promotes heavy dependence on pesticides as evidenced by calendar based spraying on cotton and wanton use of pesticides meant for cotton on other crops including vegetables.

Pesticide Importation, quality control, inspection and use: Malawi is largely a net importer of formulated pesticides. Incidences are rife of illegal importations, fake or substandard products as widely reported by farmers after pesticide applications fail to yield desired results, street vending of often highly hazardous pesticides (HHPs) not registered for use in Malawi, widespread marketing by unregistered agrodealers, decanting of pesticides into smaller packages and poor labelling. The government also procures large quantities of pesticides for distribution to farmers through the Farm Input Subsidy Programme. FISP has been directly responsible for the generation of a major part of the obsolete pesticide stocks. Poor procurement practices, needs assessment, lack of quality control, and poor stock management in the programmes have given rise to 150 tonnes of unusable and unwanted grain storage pesticides. Fortunately, these pesticides have now degraded and very likely they are suitable for local disposal.

Although mandated through the Pesticide Act 2000 to regulate importation, sale, storage, use and disposal of pesticides, The PCB's operations are severely hampered by poor human resource and infrastructural capacities; a situation compounded by the currently weak regulatory framework. The PCB is unable to make sufficient inspections, offer requisite training to key stakeholders and undertake regular sampling and testing to determine product quality due to inadequate resources including manpower and laboratory facilities. The PCB does not have a clear strategic plan complete

with objectives, tasks, infrastructural, financial and human resource requirements that can be used to engage policy makers and leverage the institution's argument for higher fiscal allocations.

Obsolete Pesticides Stocks and Contaminated sites: Malawi has legacy stocks including POPs dating as far back as the 1980s. Lack of and poor adoption of sustainable pest management strategies, uncontrolled importations, illegal repackaging, lack of quality control of pesticide formulations, poor practices of the centralized government procurement, excessive donations of pesticides during red locust and other migratory pest emergencies, poor storage and stock management as well as ban of certain pesticide products for environmental and health reasons resulted in the accumulation of obsolete pesticides in the country. In 2008, Croplife in collaboration with PCB and EAD carried out a national inventory of obsolete pesticides. A total of 380 tonnes of obsolete pesticides including POPs and approximately 18 000 empty pesticide containers had been inventoried and centralized in two government stores in Lilongwe and Blantyre when the project ended in May 2012. Ever since, some of the containers have begun leaking and therefore a proportion of these stocks (52 tonnes) needs to be repackaged again prior to shipment for disposal by high temperature incineration.

Some of the obsolete pesticides had been in storage in the estates for a very long time and contaminated six sites where they were held, namely; Agricola Farms Tobacco Estate, Malangalanga ADMARC, Kasungu Wimbe Tobacco Estate, Mzuzu Coffee Headquarters and the Vizara Rubber Estate. Four of these contaminated sites have since been prioritized as needing further risk assessment for remediation.

Management of empty pesticide containers: Currently the legislation in Malawi does not place responsibility on pesticide importers, formulators and retailers to follow and adopt life cycle management of their products from cradle to grave' (including empty containers). There is no comprehensive system in place to sustainably manage empty containers arising from the agricultural and public health sectors. An estimated 55,000 empty metal, plastic, paper and aluminium pesticide containers are produced annually through agricultural activity in Central and Southern regions of Malawi. This represents 95% generation of empty containers in Malawi. Some of these containers are rinsed (70%), punctured and stored on farms. Outside such farms, empty pesticide containers are sold to pesticide resellers or unscrupulous recyclers whose products end up in the food sector. In the household, they are reused for domestic purposes, representing an enormous risk for human health, and particularly of women and children. Apart from having no comprehensive system to deal with the empty pesticide containers, there is also a general lack of awareness of both the general public and also pesticide distributors of the health and environmental risks posed by pesticide containers.

Child Labour and exposure to pesticides: Children and women are at particular risk of exposure to pesticides because of long hours they spend in the field. Most children suffer from environmental exposure to pesticides by working, living nearby or passing through sprayed fields. Children have a lower tolerance to toxic substances as they breathe, eat and drink more in proportion to their body weight. Their ability to discharge of toxins also differs from adults. Exposure to hazardous chemicals and pesticides can seriously affect their physical and neurological development. In Malawi the prevalence rate of child labour is over 37% with 53.5% found in the agricultural sector.

Capacity building in sustainable agricultural practices, Integrated Pest Management (IPM) and Conservation Agriculture (CA): Chemical control is the most common and first line of defence available to most farmers in Malawi. The major crops grown in Malawi, for which pesticides are used, include tobacco (40-50%), coffee (15-20%), sugarcane (10-15%), cotton (10%) tea (5%) and maize (4%). The use of pesticides and agrochemicals is expected to further increase as a consequence of the intensification of agriculture. Problems associated with heavy and inappropriate

pesticide use such as pest resurgence, pest resistance and human poisoning although poorly documented, are known to be widespread in Malawi. Pest problems are often exacerbated by improper management practices that do not address the overall health of the ecosystem. The requirement for adoption of an Integrated Pest Management (IPM) in farming systems is widely recognized. IPM is an ecosystem approach to crop production and protection that combines different management strategies and practices to grow healthy crops and minimize the use of pesticides. As of today however, Malawi does not have an IPM policy in place. Pest management is addressed in several documents produced by the Malawi Agriculture Sector Programme in the Ministry of Agriculture and Irrigation, in particular the Malawi Agriculture Crop Pests and Control; the Guide to Agriculture Production in Malawi and the Major Pests and Diseases of Important Crops in Malawi. These documents provide for a description of the major pests attacking crops grown in the country and possible control methods, including, cultural practices such as the use of resistant varieties, and botanicals. Recently (2013), under the large World Bank-led Agricultural Productivity Program for Southern Africa (APPSA), a Pest Management Plan has been proposed with the objective of increasing the productivity of maize, rice and legumes through the introduction of improved varieties and modern farming technologies. The programme emphasises the need to establish a national IPM Programme based on the understanding of the ecological relationships within a farming system (crop, plant, pests and organisms and factors influencing their development) to conserve the ecosystem services. The Plan also acknowledges the socio-economic dimensions of an IPM programme and the importance of involving farmers in finding, locally relevant suitable solutions. The notion of IPM is therefore in principle understood but extension officers and farmers lack any on-farm experience and confidence in the practice of IPM. Traditional agriculture extension approaches, including this of Malawi, have tended to focus on a top down transfer of technology which has shown over the years to be counterproductive in that it creates reliance on the use of external inputs and does not build farm resilience to environmental stresses. A significant attitudinal shift towards more participatory, people-centered educational approaches like Farmer Field Schools (FFSs) would ensure a higher rate of success in promoting a form of agriculture more socially and environmentally sustainable. FFSs are participatory learning programmes that aim to increase farmers' ecological knowledge and capacity to make sound management decisions based on the actual field conditions. IPM FFS Programmes have been successfully conducted in several African.

In the context of increasing crop performance, Conservation Agriculture (CA) is being mainstreamed into national programmes to build climate resilience and foster sustainable crop production intensification. For the past decade various research and development partners, including FAO and ICIPE have tested CA across Malawi.

Information Exchange: Good collaboration and transparent communication amongst the various stakeholders underpins sound life cycle management of pesticides. In Malawi institutions with relevant activities include PCB, the Department of Agricultural Research Services (DARS), the Department of Crop Development (DCD) the Department of Agricultural Research and Extension Services (DAES) in MoAI, MRA and Malawi Bureau of Standards (MBS) both under MoTI, EAD in MoECC, CropLife Malawi some NGOs and Farmer associations. However, information exchange amongst the institutions is weak. This has implications on management of pesticides at national level, including centrally procured stocks and also hinders successful implementation of the international Conventions such as the Rotterdam Convention. A local platform where keen stakeholders can hold virtual meetings regularly to exchange information pertaining to pesticide management would help strengthen life cycle management of pesticides in Malawi.

b) Baseline and co-financing initiatives

Several initiatives are ongoing, or have recently been concluded, which are aimed to address issues of environmental stewardship, sustainable intensification of agriculture and social sustainability with relevance to the project goal to reduce the risks associated with the use of pesticides to the environment and human health.

FAO

Technical Cooperation Programme

The Government of Malawi sought technical assistance from FAO to strengthen its pest and pesticide management capacities with the broader objective of contributing to sustainable agricultural production and environmental sustainability. In 2012, the FAO Technical Cooperation Programme (TCP/MLW/3302) was granted to support primarily a legislation review and the safeguarding operation of obsolete stocks. A draft **Pesticides Bill 2013** was produced and submitted to the line ministry (the Ministry of Agriculture and Food Security) and now awaits Cabinet approval. Two PCB officers were trained in the FAO Pesticides Stock Management System (PSMS) and project Monitoring and Evaluation (M&E). In close collaboration with CLI approximately 380 tonnes of obsolete pesticides were safeguarded in two temporary storage facilities in Kanengo – Lilongwe, central region and in Chirimba – Blantyre, southern region of the country. The project supported some activities for contaminated land assessment and risk management.

Through additional support from the **FAO-EU project “Capacity Building related to Multilateral Environmental Agreements (MEAs) in African, Caribbean and Pacific (ACP) countries - Clean-up of obsolete pesticides, pesticides management and sustainable pest management”** funded by the EU”, contractual arrangements for disposal have been made. In addition, 4.5 metric tons of Methyl Bromide comprising 70 gas cylinders of various volumes were sent to Europe for destruction by an international hazardous waste contractor. The project also produced messages on leaflets, radio, television and newspaper articles and a pesticide awareness week and engaged media fraternity on pesticide issues. A big contribution in terms of M&E was also paid by the two independent evaluations carried out which led to technical and management recommendations to strengthen the project delivery.

FAO is also implementing projects seeking to build resilience and mitigate the impact of climate change on poor households. These are: the **EU funded CSA programme “Capturing the synergies between mitigation, adaptation and food security¹”** the Tripartite (COMESA-EAC-SADC) Programme on Climate Change in Eastern and Southern Africa² and the African Solidarity Trust funded project on ‘Building the capacity for most vulnerable households to meet their basic need to withstand shocks³’. This project as part of its activities at farm level will gathered data on best practices to increase resilience of farming systems to environmental stresses and build the capacity of farmers to improve their farm management skills.

Child Labour project

The FAO project, “Programme on Child Labour Prevention in Agriculture⁴”, is undertaken to strengthen the delivery against Malawi’s Framework for Action to address child labour in agriculture and seeks to raise awareness on the issue of Child Labour and to reduce risks to children in

¹ GCP/INT.139/EC

² OSRO/RAF/307/COM

³ GCP/MLW/064/MUL

⁴ FMM/GLO/100/MUL

agriculture. Some of the interventions to address child labour in the country include the promotion of Good Agricultural Practices that embrace technologies such as Conservation Agriculture (CA), Integrated Pest Management (IPM) and livelihood diversification and build on past successes of the Junior Farmer Field and Life Schools (JFFLS).

Croplife International

In November 2008, Malawi became the fifth country in Africa to establish an obsolete pesticides management programme called CleanFarms. This programme was supported by Croplife and was implemented in conjunction with PCB. The inventory identified a total of 380 tonnes of obsolete pesticides including a stock of 12,000 litres for migratory pest control and 18,000 empty containers. Since at the time no local hazardous waste company existed in Malawi, the project approached a local entrepreneur, CycleOps, interested in forming a waste management business. Veolia, an international company specializing in hazardous waste management, trained CycleOps personnel and helped oversee its activities. Under Veolia's supervision, CycleOps carried out all repacking and centralizing activities in 2012. Although the project almost completed safeguarding obsolete pesticides, there was still work ahead with empty containers and the centralisation of government procured low-strength grain dusts. The project only managed to eliminate 40 tonnes of degraded Actellic dusts for reuse as a soil pH enhancer by a manufacturer of compost. CLI is a key co-financer of activities on disposal of obsolete stock (component 1)

Agriculture Sector Wide Approach (ASWAp)

The 2011–2015 ASWAp is a priority investment programme in the agriculture sector that aims to accelerate agricultural growth and development, and which is based on the priority agricultural elements of the Malawi MDGS II. It represents a consensus on how Malawi can accelerate agricultural growth and development. The ASWAp identifies key constraints to the agriculture sector and the required investments within the context of national and regional strategies, policies and targets for agricultural development and food security. Being implemented under ASWAp are various programmes contributing to food security and cofinancing various components of this project. These include the Flanders International Cooperation Agency (FICA) support to strengthen Agricultural Extension Capacity, the IFAD funded project on Biological Control of the Diamond Black Moth (DBM) on brassicas and APSA programme with the Department of Agricultural Research Services (DARS). The IFAD project project is supported by the Nairobi based International Centre for Insect Physiology and Ecology (icipe) and aims to release biological control agents for DBM on *brassicas* as part of an IPM strategy to manage the pest. The DBM study covers the same geographical area and crop of interest with this project. This project will build on the success of ASWAp and coordinate its action with regard to Training of Trainers on vegetable IPM, on-farm IPM participatory research for the development of biological control options. The project will benefit from the biological control methods generated from the IFAD study.

Self Help Africa

Self Help Africa (SHA) works with 3000 smallholder farmers in Lilongwe and 2900 farmers in Chitipa to promote food security through diversified cropping systems and promotion of Good Agricultural Practices (GAPs) such as CA and IPM using the Lead Farmer approach. In Balaka, which is a common geographical area with this project, SHA is working with 500 smallholder farmers (60%) women to increase crop production with focus on linking farmers to markets and preventing post-harvest losses.

Farmers Union Malawi (FUM) has developed training manuals for cotton production. Great Lake Cotton Company (GLCC) is working with over a 1000 cotton farmers in all three project areas for IPM (Machinga, Salima and Shire Valley ADD) using the Lead farmer approach to promote GAP including IPM.

c) Incremental cost reasoning

Some of the re-packaged pesticides have deteriorated and leaked in the 18 months since they were repacked by Croplife and require to be repacked again. In addition some of the packaging equipment is no longer legal for international shipment. In total, 52 tonnes of materials are required to be repacked once again. During the PPG phase it was established that some stakeholders mainly from private sector were still holding obsolete pesticide stocks and sought assistance to dispose of these in an environmentally sound manner. During the Clean Farms project 40 tonnes of obsolete Actellic dust was found to be completely degraded and was supplied to a local farmer for use as a soil pH enhancer. It is anticipated that the remaining 150 tonnes of similar grain storage pesticides procured under the government's Farm Input Subsidy scheme have also degraded and no longer pose a significant threat to human health and the environment. These 150 tonnes will be left with the government to undertake local disposal. However Malawi does not have the appropriate disposal facilities to incinerate or treat the highly hazardous waste that constitutes the bulk of the safeguarded obsolete stocks (240 tonnes). In addition the country needs technical assistance in the remediation of pesticide contaminated sites.

While the Pesticides Act was revised during the TCP and the Pesticides Bill 2013 now awaits Cabinet approval, there are gaps in the Regulations that particularly hinder the effectiveness of the PCB. Incremental activities will focus on addressing these gaps and will seek to address inefficiencies in the quality control, stock management, inspection services, training of regulators and key stakeholders as well as improving coordination and information exchange between the various players in pesticide management.

Incremental activities will also deal with barriers to adoption and up scaling of IPM from past and ongoing initiatives and awareness raising from grassroots through to policy level. The project has taken an innovative approach that is in line with the FAO's Save and Grow approach to sustainable crop production intensification (FAO Strategic Objective 2). In the GEF funded intervention Farmer Field Schools will focus on enhancing ecosystem services through improved farming practices.

Without the GEF funded intervention the obsolete stocks and contaminated sites will continue to pose risks to human health and the environment. And without addressing capacity issues in the life cycle management of pesticides, the mismanagement and accumulation of new obsolete stocks will continue in the future.

1.3 FAO's COMPARATIVE ADVANTAGE

FAO is mandated to assist member countries with the prevention and management of agricultural pests, the appropriate distribution and use of pesticides including their disposal as governed by the International Code of Conduct on Pesticide Management, and the control of international trade in particularly hazardous pesticide formulations as governed by the Rotterdam Convention on Prior Informed Consent. Having recognized the central role pesticide risk reduction has in sustainable crop production intensification, the FAO Council specifically gave the Plant Production and Protection Division of FAO (AGP) the task to assist member states with pesticide risk reduction and phasing out of Highly Hazardous Pesticides.

Within the new FAO strategic framework, AGP provides the Secretariat to *Sustainable Objective 2* aimed to *increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner*. For over three decades, FAO has provided guidance on Integrated Pest Management (IPM) through the Farmer Field School (FFS) approach to reduce reliance on chemical pesticides. IPM increases the sustainability of farming systems and improves ecological sustainability, as it relies primarily on the enhancement of ecosystem services.

FAO has operated a programme for the prevention and elimination of obsolete pesticides since 1994. The experience gained by AGP in the area of obsolete pesticide prevention and disposal is unique among the Intergovernmental Agencies. The FAO programme that helps countries to deal with obsolete pesticides is currently supporting activities in about 60 countries. FAO hosted the GEF-funded Africa Stockpiles Programs (ASP) Technical Support Unit. FAO has also a legal office (LEGN) with extensive experience in assisting member countries in designing legislation for sound pesticide life cycle. LEGN has in the past successfully assisted Malawi in related legal and regulatory aspects of pesticide management.

FAO has the added comparative advantage in leading this project with the interactions and synergies already generated with the organization's extensive Regular Programme of work and project portfolio, which support the implementation of a large work programme on Sustainable Crop Production Intensification (SCPI) and Pesticide Risk Reduction. In addition FAO has broad experience in capacity building and a wide range of guidelines and training materials are already available to ensure sound implementation the project's components. FAO has been working in Malawi for more than thirty years and has a number of on-going projects and initiatives supported by in-country expertise. FAO has established good working relationships with Government and other stakeholders such as donors, other UN agencies, civil society organizations, private sector and Farmers' Organizations.

FAO is therefore ideally and uniquely positioned to support its member states in the development and implementation of projects for the comprehensive, safe and effective management of pesticides, disposal of obsolete pesticides, and promotion of alternatives to hazardous pesticides.

1.4 PARTICIPANTS AND OTHER STAKEHOLDERS

The following state and private sector institutions, civil society and NGOs will participate in and benefit from the project:

Pesticide Control Board (PCB): Under MoAI, PCB is the leading executing partner and will host the Project Management Unit (PMU). PCB will coordinate the implementation of all project activities in collaboration with the Department of Agriculture Research Services and the Department of Crop Development (DCD) in Ministry of Agriculture and Food Security and with Environmental Affairs Department in the Ministry of Natural Resources, Energy and Environment.

Environmental Affairs Department (EAD): EAD as the Government agency responsible for the development and enforcement of regulations related to the management of hazardous waste including obsolete pesticides will be responsible for the supervision of disposal operations and environmental compliance. EAD is currently developing specific regulations for the management of chemicals under the Stockholm convention will also participate in the empty pesticide management scheme to be piloted under the project. EAD promotes conservation, sustainable use, and protection of the environment and natural resources in line with the principles of sustainable development, as articulated in Agenda 21 of the Rio Convention, Johannesburg Plan of Implementation (JPOI), Millennium Development Goals, Malawi Growth and Development Strategy (MGDS). EAD will therefore be a task team member of Disposal of Obsolete Pesticides and remediation of Contaminated Sites, Container Management and strengthening legal and institutional frameworks for sound pesticide life cycle management.

CropLife: As the pesticide industry association, CropLife Malawi has, through the CLI funded CleanFarms project, spearheaded work on obsolete pesticides and initiated work towards development of a sustainable national empty container management strategy. CropLife Malawi will lead the task teams on Disposal of Obsolete Pesticides and remediation of Contaminated Sites as

well as the component on development of a sustainable empty container management strategy. CropLife Malawi will be represented in the PSC.

Department of Agriculture Research Services (DARS): This is a technical Department in the Ministry of Agriculture and Food Security and is responsible for conducting research and generating technologies for increased and improved agricultural productivity. The department will be a member of the two task teams namely; Integrated Pest Management/Farmer Field School (IPM/FFS) and Strengthening of Legislative and Institutional frameworks for sound pesticide life cycle management.

Ministry of Justice and Constitutional Affairs: The ministry is mandated to provide policy guidance and direction to government on all legal and constitutional matters. The ministry will be a task team member for the component to strengthen Legislative and Institutional Frameworks for sound pesticide life cycle management.

Department of Crop Development (DCD): This is one of the technical departments under Ministry of Agriculture and Food Security. DCD is responsible for crop and farm mechanisation promotion; crop protection and farm input services and addressing the knowledge gap at extension staff level and specialised crop based farmer organisations to enhance effective diffusion of technologies released by the Agricultural Technology Clearing Committee (ATCC). DCD in close collaboration with the Department of Agricultural Extension Services lead the component to promote safer alternatives to chemical pesticides through IPM FFS and will also be a task member of the component on developing a sustainable empty container management strategy.

Department of Agricultural Extension Services (DAES): The Department which is under MoAI is mandated to provide Agricultural Extension Services that enhance adoption of improved technology for all gender categories and vulnerable groups in order to improve and sustain agricultural productivity. DAES is the only nationwide extension provider working across all value chains and other services such as health and nutrition. DAES operates its own printing service and has just received a new high end printer through the Flanders International Cooperation Agency (FICA), a recording studio for producing radio programs and a film unit. DAES also continues to make use of its mobile communication units which delivers extension materials through road shows and distribution of printed materials. DAES has also recently adopted ICT and has experimented with the use of 'push' messaging using SMS system. The Department will collaborate closely with DCD in leading the component on promoting safer alternatives to chemical pesticides through IPMFFSs. Government extension workers will constitute the majority of trainers of trainers (ToTs) for IPM FFS. The project will rely heavily on the current infrastructure in developing a communication strategy to promote IPM and raise awareness on pesticide risks.

The Sugar Production Industry: Private companies like Illovo, Ethanol, and smallholder sugar growers like Kasinthula and Dwangwa cane growers trust will all participate in the pilot container management program.

The Cotton Industry: The Cotton Development Trust (CDT) with all its affiliates including Farmers' Union of Malawi (FUM), Great Lakes Cotton Company (GLCC), Export Trading Group; and Chinese ginners will participate in the empty container management pilot program. GLCC will be a collaborating partner for the component to promote safer alternatives to chemical pesticides focusing on the promotion of cotton IPM. GLCC is already working in the same geographical areas proposed for this study (Machinga, Salima and Shire Agricultural Development Divisions (ADD)) promoting IPM technologies using the Lead Farmer approach. FUM is focusing on building capacity for smallholder farmers through networking and provision of extension services and will be a key partner in promoting cotton IPM. During the PPG, FUM shared extension materials already developed for cotton production.

The Ministry of Health: The Malaria vector control programs, who currently are advocate for the use of banned DDT in mosquito control, will also participate particularly in the Component of empty container management and promotion of safer alternatives, assisting in the baseline survey to generate data on pesticide poisoning incidences.

Non Governmental Organizations (NGOs) Local NGOs such as Total Land Care and Self Help Africa (SHA) working to increase food security and economic growth through sustainable production intensification are key stakeholders in this project. They will contribute to the implementation of the pilot empty container management scheme and promotion of Good Agricultural Practices (GAP) such as IPM as well as development of a communication strategy on benefits of IPM and awareness raising on pesticide risks. SHA is working with academic institutions and farmers to promote organic farming and develop sustainable and effective post-harvest management strategies. SHA is cofinancing the component of promoting alternatives to chemical pesticides.

Centre for Agricultural Bioscience International (CABI) – Plantwise

Malawi Government launched Plantwise Project with financial support from Centre for Agricultural Bioscience International (CABI). Plantwise supports national extension systems in providing smallholder farmers with better access to the advice and information needed to improve agricultural productivity. The project has established and is operating plant clinic networks, supported by a global knowledge bank, a central repository within Plantwise for plant health diagnosis and management information. Plantwise also aims to strengthen national plant health systems by linking with stakeholders such as National Plant Protection Organisations (NPPOs), extension, and research. Collaborations with Plantwise will be sought on the promotion of alternatives.

Farmers: The project will work closely with smallholder farmers especially in building their management skills to reduce reliance on chemical pesticides using the FFS approach.

1.5 LESSONS LEARNED FROM PAST AND RELATED WORK

The implementation of the FAO TCP suffered some administrative challenges that hindered full attainment of objectives. There is a need to employ full-time and dedicated project staff for implementation of a project of the magnitude of the present undertaking as opposed to relying entirely on inadequate and overstretched government staff. The project therefore proposes for the placement of dedicated Project Management Unit (PMU) led by a dedicated and full-time National Project Coordinator paid by the project. For proper coordination with other stakeholders, the PMU should be strategically located at premises closest to the key project areas and work under close supervision and in close collaboration with FAO.

Under the CleanFarms project, local capacity was successfully built to handle obsolete pesticides including collection and safeguarding, triple rinsing and container disposal. A legacy of the project is a company called CycleOps Management Consult. The company was trained and supervised by Veolia Environmental from UK for key operations namely collection, transportation and safeguarding of 300mt of obsolete pesticides. In addition the company was trained in collection, triple rinsing, crushing of 5,000 legacy containers that were collected as associated wastes. The project will leverage on this capacity in engaging them as a collector of empty pesticides containers under the pilot project. In this way the project will continue to strengthen local capacity in the management and handling of hazardous pesticide waste. During the Clean Farms project and PPG activities, it was noted that 70% of the empty containers were not properly cleaned. In most cases tripling rinsing is poorly done. The proposed project therefore proposes to undertake a nationwide outreach programme on triple rinsing under the component on development of a sustainable empty container management strategy.

Regarding disposal of low risk obsolete pesticide stock such as storage dusts with low or no more active ingredients, sizeable quantities (40T) were supplied to a local farmer for composting during the Clean Farms project. It is anticipated that the project will pursue more environmentally sustainable disposal methods along the lines of bio remediation. The relatively low cost approaches will save money earmarked for disposal and resources will be reallocated to strengthening activities to prevent further accumulation of obsolete stocks.

Evidence from past IPM initiatives in smallholder systems of Malawi has shown that smallholder IPM is best viewed holistically in the context of improving crop management. Without higher yields and clearly demonstrated externalities such as the environmental and human health costs, the incentive to adopt IPM is limited¹. A successful promotion of IPM includes: focusing on building local knowledge on restoring and preserving ecosystem services in farms, strengthening institutional collaboration at local and national levels, strong involvement of Government extension staff and participation of NGOs, research institutes and collaboration of key Government Departments and academia. Wide consultations were held and linkages established during the PPG phase to secure participation of these stakeholders from disposal of pesticide work to activities that prevent further accumulation. Under the TCP, preparatory activities such as the formation of Farmer Study Groups (FSGs) did not progress into fully fledged FFSs because of the limited life span of the project, but more importantly due to the lack of the availability of fully trained facilitators on FFSs in the country. This project recommends that FFS season-long Training of Trainers are organised to develop the skills of extension service providers. Besides training extension staff, deliberate efforts should be done to train lead farmers who can lead the groups to ensure continuity even in the event of staff attrition and for sustainability beyond the project's life span.

1.6 LINKS TO NATIONAL DEVELOPMENT GOALS AND PRIORITIES, AND GEF AND FAO'S STRATEGIC OBJECTIVES

a) Alignment with Malawi Growth and Development Strategy

The Agriculture Sector Wide Approach (ASWAp) reflects the priorities of the Malawi Growth and Development Strategy and the Comprehensive African Agricultural Development Programme (CAADP) of the African Union (AU). This project will complement the country's commitment to stimulating sustainable economic growth and food security performance through efficient production and sustainable farm management as detailed in the UNDAF 2012–2016 and the ASWAp (2011-2016) documents developed by the Government. The project is also aligned with Malawi's Millennium Development Goals (MDG). The MDGII identifies nine Key Priority Areas (KPAs) and one of them is 'Climate Change, Natural Resources and Environmental Management'. The project contributes to MDG 1: Eradicate extreme poverty and hunger; MDG 2: achieve universal education through efforts to raise awareness amongst school children; MDG 3: promote gender equality and empower women through promotion of pesticide management measures that improve women's working and living conditions; MDG 4: reduce child mortality, MDG 5; improve maternal health and MDG 7: ensure environmental sustainability through disposal of obsolete pesticide stocks, remediation of contaminated sites and sound life cycle management that prevents further accumulation.

b) Alignment to the Stockholm Convention National Implementation Plan

¹ Orr, A. & Ritchie, J.M. (2004) Learning from failure: Smallholder farming systems and IPM in Malawi.

The Government of Malawi ratified the Stockholm Convention on POPs in 2009 and submitted its NIP to the Secretariat of Stockholm Convention in 2005. The NIP outlines how Malawi plans to meet its obligations under the Convention with regard to elimination of POPs and remediation of contaminated sites. The proposed project will support implementation of the following priorities identified in the NIP:

- I. Review of pollution control related policies and legislation for effective implementation of the Stockholm Convention;
- II. Strengthening institutional capacity of Government Departments and other institutions involved in the implementation of the Rotterdam and Stockholm Conventions;
- III. Strengthening and enhancing enforcement of relevant legislations;
- IV. Developing regulations on monitoring of POPs;
- V. Strengthening institutional capacity of Government Departments and other institutions involved in monitoring of POPs releases;
- VI. Developing and implementing clean up and remediation schemes for POPs contaminated sites;
- VII. Developing programmes for raising awareness on POPs releases and their effects on human health and the environment.

c) Alignment with GEF focal area

The project contributes to the implementation of the GEF-5 Chemicals Strategy. It focuses on CHEM-1, specifically on prevention, management and disposal of persistent organic pollutants (POPs) and that the POPs contaminated sites be managed in an environmentally sound manner. The project will look at safe disposal of POPs and other obsolete pesticides, approximately 390 tons, in an environmentally sound manner, strengthening the institutional capacity to enforce pesticide regulations and promote alternatives to chemical pesticides.

d) Alignment with FAO Strategic Framework and Objectives

The reviewed FAO Strategic Framework (2010-2019) comprises five Strategic Objectives that represent the main areas of work to achieve Organisational Outcomes. This project will support in particular the implementation of Strategic Objective 2 (SO-2), 'Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner.' The project is aligned to the UNDAF (2012 -2016) and the FAO Country Programming Framework (CPF). The project will support implementation of CPF Priority area 3: Support to policy and programmatic action on sustainable natural resource management and climate change in the context of national food security.

Alignment with MAWs

The project aims to promote sustainable intensification of agriculture by testing and improving local agricultural practices in cotton and vegetables. Special emphasis will be placed in building the capacity of farmers to conserve ecosystem services such as biological control to prevent the misuse of pesticides and on testing conservation agriculture to increase productivity.

2 PROJECT FRAMEWORK AND EXPECTED RESULTS

2.1 PROJECT STRATEGY

The project prioritizes activities that reduce immediate risks to human health from deteriorating obsolete pesticide stock including empty containers as well as contaminated sites. In addition, the project design builds on present and past initiatives to prevent further accumulation of obsolete pesticide stocks through the promotion of sustainable intensification of crop production. The project particularly builds on achievements of the TCP on strengthening pest and pesticide management capacities.

In designing the project, priority has been placed on removing immediate danger posed by the existing obsolete pesticides stock on communities and the environment and on supporting the development of farming practices that reduce the use of pesticides. The strategy focuses on strengthening national institutional capacity to sustain the results achieved. The project will look to use and adapt as necessary existing guidelines and training materials developed by FAO and partners on pesticide management and good agricultural practices to support countries to adhere to the International Code of Conduct on Pesticide Management and align Malawi national policies and tools to the regional and international instruments when relevant. The project will also partner with regional programmes and initiatives on IPM FFS. In particular, participation in regional FFS workshops organised by FAO for the Southern African region and in knowledge exchanges activities with other ongoing FAO regional programmes will be ensured.

A gender-sensitive approach will be mainstreamed to ensure that the project analyses negative impacts of pesticide use on vulnerable groups, and in particular women and children; and that the alternatives promoted adequately address the gender issues highlighted.

The project also seeks to collaborate actively with various government partners, private sector, academia, NGOs and farmer groups to ensure sustainability beyond the project life cycle.

2.2 PROJECT OBJECTIVES

The overall goal of the project is to reduce economic, environmental and social risks associated with the use of pesticides in agriculture and to promote sustainable intensification of agriculture.

The specific objectives of the project are:

- to safely dispose of POPs and other obsolete pesticides and remediate heavily pesticide-contaminated sites (Component 1);
- to develop and implement a pilot management system for empty pesticide containers (Component 2);
- to strengthen the national capacity for sound pesticide management in line with the International Code of Conduct on Pesticide Management and the international Conventions (Component 3);
- to build farmers' knowledge, skills and capacity to manage farms with an ecosystem approach through Farmer Field Schools (Component 4).

2.3 PROJECT COMPONENTS

The following section outlines the scope of the four technical project components including their outcomes and outputs.

Component 1: Safe disposal of POPs and other obsolete pesticides, and remediation of heavily contaminated site. This component will focus on the safe disposal of up to 380 tonnes of stockpiled POPs and other obsolete pesticides, and the remediation of at least one prioritized pesticide-contaminated site. The majority of stocks recorded in the CleanFarms database (380 tonnes) are stored at two Government central collection centres, the Blantyre and Lilongwe Small Holder Farmers Fertilizer Revolving Fund Central (SFFRFFM) stores.

The inventory is summarized in the table.

Description	Quantity (tonnes)
<u>Suitable for local disposal</u>	150
Low hazard degraded grain storage pesticides in original containers suitable for local disposal by the government	
<u>For high temperature incineration abroad</u>	
Hazardous pesticides repacked by Croplife CleanFarms and suitable for international shipment	178
Hazardous pesticides that require repacking because of leaking or inappropriate packaging	52
Legacy contaminated empty containers	10
Total quantity for high temperature incineration	240

Four of the six contaminated sites identified in the country have been prioritized under the TCP for risk management, namely Agricola Farms Tobacco Estate, Malangalanga ADMARC, Kasungu Wimbe Tobacco Estate, and Vizara Rubber Estate. These four sites require detailed investigations in order to develop conceptual site models and to identify appropriate risk reduction strategies and site specific environmental management plans. This will involve soil and ground water sampling. Only one site will be subject to risk reduction measures under this project. The risk reduction strategies will employ locally available, cost-effective techniques, ensuring it can be repeated on the other sites by trained national staff, post-project.

Outcome 1: Risks to human health and the environment are reduced through safe disposal of POPs and other obsolete pesticides and remediation of pesticide-contaminated sites

Output 1.1 A safeguarding and disposal strategy is developed in line with national and international best practice

A national task team led by Crop Life Malawi and supported by an international consultant will update the existing Environmental Management Plan (EMP) that was prepared under the TCP project based on guidance provided in the Environmental Management Toolkit (EMTK) for obsolete pesticides. Inventory data in the Pesticide Stock Management System (PSMS) will be updated and used to finalize the EMP which defines the preferred disposal strategy for each of the wastes, the risks and associated mitigation measures. The updated EMP will undergo disclosure and approval in line with national requirements. The EMP will provide:

1. the strategy recommended to be adopted by the government for the local disposal of 150 tonnes the non-hazardous degraded grain storage pesticides; and
2. the strategy for the repacking (where necessary), international shipment and disposal of the 240 tonnes of hazardous obsolete pesticides and associated wastes

Main Activities: The main activities to be implemented under this Output are:

A 1.1.1: Update the Environmental Assessment (EA) and Environmental Management Plan (EMP) for the 390 tonnes of obsoletes stocks centralized at two central collection centres, in Blantyre and Lilongwe;

A 1.1.2: Establish and train a national task team drawing from private sector and government (PCB, DARS DCD, DAES, EAD) on the implementation of the specific EMP for disposal of hazardous waste.

A 1.1.3: Provide the disposal strategy to government for local disposal of 150 tonnes of degraded pesticides

Timeline for implementation: The EA and EMP will be developed, disclosed and approved in year 1 of project implementation. Training will be conducted in Y2 and the strategy provided in the first half of Y2.

Output 1.2: 240 tonnes of obsolete stocks and associated hazardous waste are disposed of in an environmentally sound manner

The EMP will form the basis of the technical specification for a tender for services for safeguarding and disposal of the 240 tonnes of hazardous waste identified in PSMS that require high temperature incineration. The selection of the contractor and signing of the contract will be done by in full compliance with the necessary procurement and oversight procedures required by FAO. The selected contractor will be responsible for all aspects of repacking, transportation and disposal. The national task team will provide oversight and monitor disposal operations. In particular, compliance with EMTK standards for repackaging (volume 4), transport & interim storage (volume 2) and Basel and Stockholm convention technical guidelines on environmentally sound disposal.

Main Activities: The main activities to be implemented under this Output are:

A 1.2.1: Select and award a contractor for repackaging and disposal of up to 240 tonnes of hazardous pesticides;

A 1.2.2: Repacking, where necessary, and undertaking international shipment of 240 tonnes of hazardous pesticide waste in accordance with the Basel and Stockholm conventions, and the International transport regulations for sea and land (IMDG and ADR);

A 1.2.3: Dispose up to 240 tons of hazardous obsolete pesticides by high temperature incineration.

Timeline for implementation: All safeguarding activities will be completed in year 1. Disposal will be completed in year 2 and 3.

Output 1.3: Risks posed by 1 contaminated site reduced

Four priority sites namely Agricola Farms Tobacco Estate, Malangalanga ADMARC, Kasungu Wimbe Tobacco Estate, and Vizara Rubber Estate containing an estimated total of 382 tonnes of soil with a significant contamination will be further investigated. Under the direction of an international expert, the national task team will undertake detailed and intrusive investigations including a detailed sampling plan, analysis of soil and ground water contamination and the development of a

Conceptual Site Model (CSM) for each site. Each CSM will assess the risks using Source-Pathway-Receptor analysis and provide the basis of an Environmental Management Plan for each site including strategies for risk reduction. The project will reduce the risks of at least one of these priority sites. The choice of the site(s) to be addressed will be determined by the project steering committee. The risk reduction is likely to include some form of bioremediation which requires time to reduce contamination levels. The EMPs will include procedures for the monitoring the progress and effectiveness of the interventions.

Main Activities: The main activities to be implemented under this Output are:

A 1.3.1 Train the national task team on risk assessment of contaminated sites

A 1.3.2 Develop a Conceptual Site Model (CSM) and Environmental Management Plans for the four priority site and select once site for risk reduction interventions;

A 1.3.3 Implement the EMP for the one prioritized site

Timeline for implementation: The detailed site investigations and development of the 4 CSMs and EMPs will be completed in Year 1. The implementation of the risk reduction strategies at the prioritized site will be completed in Year 3.

Component 2: Management of empty containers

This component will develop a container management scheme (CMS) including triple-rinsing, collection, storage and recycling of all types of containers. The system will be piloted around Blantyre. A draft design for the pilot was developed during the PPG phase. The design is based on the model adopted by most successful container management schemes (CMS) around the world. This model sets responsibilities for all stakeholders in the supply and use of pesticides.

- Users are responsible for the triple rinsing and puncturing of containers, and their safe storage until they can be returned to the CMS;
- The pesticide importers and distributors are responsible for establishing the CMS which provides a free of charge service to the users for the collection of containers and for the environmentally sound recycling or disposal of the collected containers. In practice most pesticide importers and distributors collectively fund and fund a single CMS with formal contracts to the waste recycling industry; and,
- Government is responsible for the monitoring and enforcement of the scheme.

The project aims to be a catalyst to facilitate the establishment of sustainably funded scheme that endures beyond the life of the project. The component has strong links with component 3 in that the development of the pesticide legislation should include regulations that formalize the roles and responsibilities of the stakeholders in the CMS. The Task team for this component is led by Croplife, the association of pesticide importers, as their members will be required to continue as the main funders and organizers for the roll-out and maintenance of the enduring national CMS beyond the project.

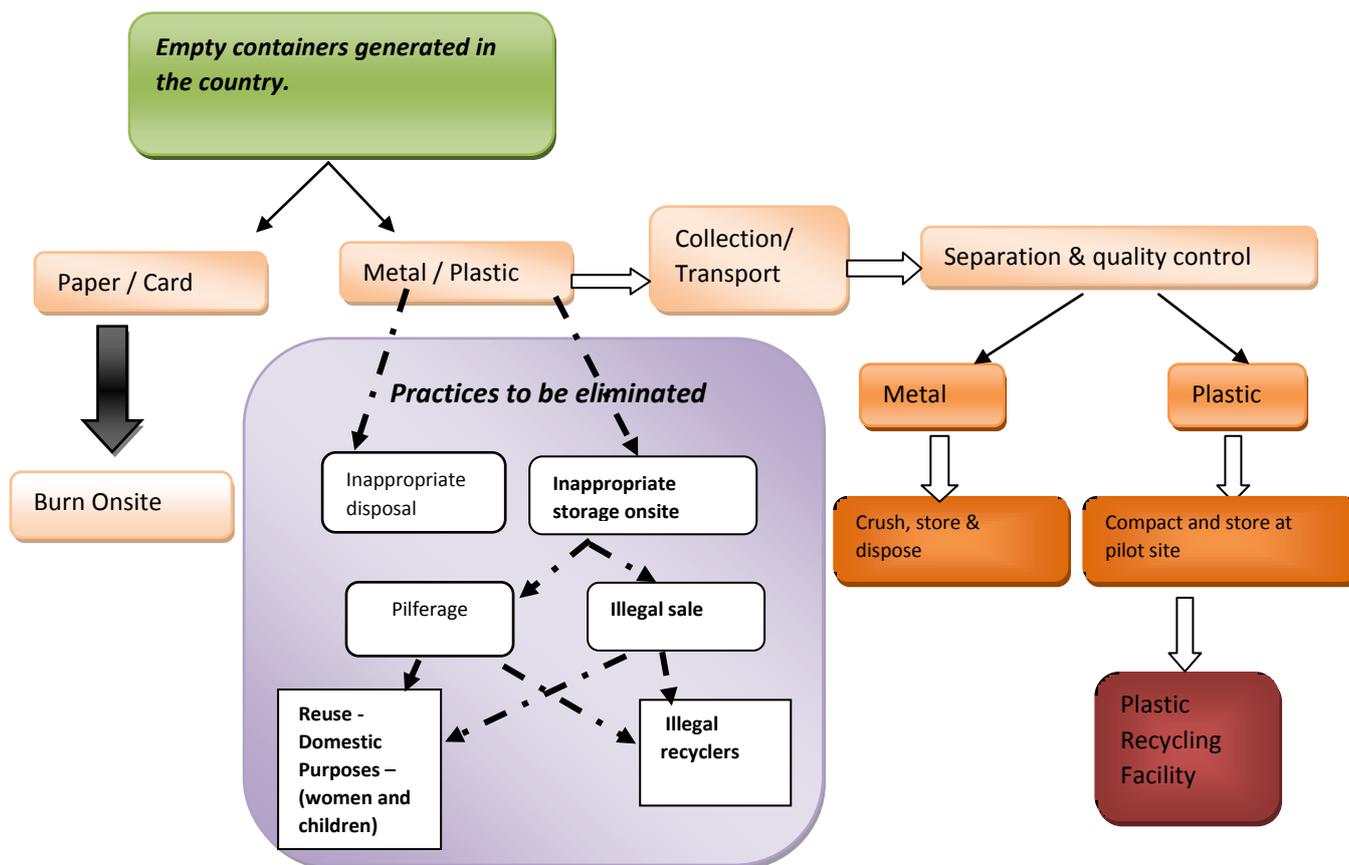
The pilot CMS will be based at a collection centre in Blantyre. Blantyre was selected as it is the location of the PMU and the centre of key agriculturally intensive areas of Thyolo, Mulanje, Zomba, and Chikwawa for tea, tobacco and sugar production. About 10 small strategically located collection sites will be placed in the respective estates, agrochemical suppliers and lead farmer areas for increased access to collection bins by the generators of empty pesticides including small holder farmers. The project will engage a contractor to supply the collection bins for the temporary storage of the rinsed empty containers, undertake the collection, transportation and recycling/disposal of

the collected containers. The project will also procure baling equipment to facilitate the economically movement of the collected containers from the central collection site to the recycling/disposal point.

Simultaneously an awareness campaign will be developed for pesticide users on the principles of triple rinsing and their responsibilities for returning containers to the scheme. The campaign will be implemented at the same time as the launch of the pilot CMS. It is expected that the collected materials will be bulked up at the main collection sites in Blantyre. The contractor and other stakeholders in the pilot CMS will be required to keep proper records of what has been collected through each of the channels so that, together with import permit details this should inform the development of a business plan. The Task team will also routinely monitor the effectiveness of the pilot to ensure that problems are addressed quickly and that opportunities to improve and test alternatives are exploited.

At the end of year 3, the task team will present the findings of the pilot to stakeholders, an action plan for the organizational structure, sustainable funding mechanism and contractual arrangements for the roll-out to Lilongwe and the rest of the country. By this time the new legislation on container management is expected to be in place. The ownership of bins and materials handling equipment that were procured as part of the contract, will be passed to the government on the basis that they may continue to be used by the scheme. Their maintenance will remain the responsibility of the CMS. The proposed design is presented in Figure 1 below.

Figure 1: Stages in the management of empty pesticide containers in Malawi



Outcome 2: Health and environmental risks associated with empty pesticide containers and their reuse are reduced

The baseline assessment carried out as part of the PPG provided an estimate of how many containers – disaggregated into type of material, packing size etc – are generated annually but did not go as far as actual quantity and product spread. During the project year 1, this detailed analysis will be conducted to generate the requisite data for the southern region of the country. The project will develop a business plan by the end of year 2 that will be used to inform any interested investor in re-cycling about the extent of throughput per annum and projected growth for the coming 5 years. The pilot facility is expected to be established and operational in the first 2 years of the project. These two years will see the construction of collection points, training of farmers and estate workers on triple rinsing; and the engagement and collection of empty triple rinsed containers by an accredited local waste management company. By Y3 there shall be an operational recycling facility.

Output 2.1 Container management pilot implemented in southern regions of Malawi

Main Activities: The main activities to be implemented under this Output are:

A 2.1.1: Update and analyse data on pesticide containers generated by the agricultural sector in the southern regions of the country;

A 2.1.2 Develop a pilot strategy for the sustainable management of pesticide containers in consultation with key stakeholders, including a business plan for Government's approval and establishment;

A 2.1.3 Engage through a competitive bid a contractor to supply collection and materials handling equipment, undertake the collection transportation and recycling/disposal of containers;

A 2.1.4 Develop and implement an awareness campaign for pesticide users for triple rinsing and their responsibilities for returning containers

As part of M&E of the project, annual reviews of the progress in all activities as highlighted above will be conducted. The reviews shall help in identifying opportunities for improving the effectiveness of the scheme and checking the project's readiness to commence activities in output 2.2. and 2.3 below.

Timeline for implementation: The pilot strategy will be agreed by stakeholders in the first 3 months of the project with the contractor engaged and communications campaign designed by month 9. The pilot will be operational by the end of year 1 and continue to run to the end of the project or at least until the hand-over to the organization that will continue to run it beyond the project.

Output 2.2: Assessment and scaling up of the Blantyre pilot scheme to a permanent operator completed

During the PPG, the project invited the collaboration and commitment of all stakeholders in the management chain proposed in Figure 1 and this process will continue in order to identify and manage a transition to a permanent operation of the pilot scheme by the pesticide distributors and importers. This output will develop a strategy for the scaling up of the management schemes. It will build on the results of the pilot project and national schemes in other countries. The pilot container collection scheme will operate on a voluntary basis, relying on certification needs and awareness raising to ensure farmer participation, but the national strategy will take into consideration legislative and regulatory mechanisms developed under component 3 to promote compliance and participation. The M&E system will play an important function in documenting and sharing lessons in order to achieve a sustainable long term solution, through regular reporting and consultation with all the identified stakeholders. Based on the experience in developing the pilot, the Croplife task team will work with the pesticide distributors and importers to establish the institutional structures for the long-term funding, management of the container management scheme and its roll-out to other parts of the country. The proposal will be submitted to government for their approval.

Main activities: The main activities to be implemented under this Output are:

A 2.2.1 Assess the Blantyre pilot scheme for scaling up

A 2.2.2 Develop and validate with pesticide importers and distributors their strategy for the long-term management of the scheme based on the pilot and present to the government for approval

A 2.2.3 Following formation by the pesticide importers and distributors of the institutional body for the management of the CMS, formally hand over the assets of the pilot to the government for them to manage their loan to the institutional body.

Timeline for implementation: At the end of year 3 the pilot will be evaluated and the strategy developed for its hand-over, roll-out and long-term management. The handover to the private sector institutional body will happen in year 3.

Component 3: Strengthening legal and institutional framework for pesticide risk management and life cycle management

Component 3 will focus on strengthening the national legal and institutional framework for sound life cycle management through development of subsidiary legislation to operationalize the Pesticide Act and revised Bill to fully reflect the International Code of Conduct. The component will also focus on strengthening the institutional capacities of PCB being the national pesticides regulatory authority to achieve better post registration enforcement capacity (e.g. inspections, training, quality control); improve coordination and establish a formal information exchange between the various actors involved in pesticide management as well as deploy PSMS for pesticide registration and stock management. The project will also develop a long term strategy for PCB operations.

Outcome 3: Legal and Institutional frameworks strengthened for sound life cycle management

Output 3.1 National Regulations developed and updated in conformity to international guidelines and submitted to Government for approval.

Technical pesticide regulations to enforce the revised pesticide legislation will be developed through a multi-stakeholder consultative approach and with the legal assistance of FAO. Regulations will specifically be developed for transportation of pesticides, disposal of empty containers, illegal trade, control of pollution and disposal of obsolete pesticide. Regulations will be submitted to the Government for approval.

Main Activities: The main activities to be implemented under this Output are:

A 3.1.1 Draft, review and validate technical regulations on pesticide transport, disposal of stocks and empty containers, illegal trade, control of pollution to enforce the revised pesticide legislation;

A 3.1.2 Develop an IPM policy through consultative process involving key national institutional stakeholders and regional expertise.

Timeline for implementation: The Regulations and IPM policy document will be submitted for approval by Government in Year 2.

Output 3.2: Measure to strengthen the capacity of the Pesticide Control Board to enforce post-registration regulations developed

An organizational strategy complete with the infrastructural and human resource requirements, workplan and budget for the Pesticide Control Board will provide a clear roadmap to strengthen the institution's post registration strategy and can serve as a tool to mobilize needed resources from Government and other development partners. This outcome will build on the review of the pesticide registration system prepared under the TCP to develop a strategy for strengthening PCB capacity.

Main Activities: The main activities to be implemented under this Output are:

A 3.2.1 Assess PCB's existing strategy and capacity to undertake post registration enforcement and formulate recommendations for its strengthening;

A 3.2.2 Train at least 5 pesticide regulators on pesticide risk assessment tools and post-registration regulations.

Timeline for implementation: The assessment of current strategy and capacity will be undertaken in Year 1 and development of the new 5 year strategy will be done in Year 1. The strategy document will be submitted to Government by Year 2. The training activities will be concluded by Y3.

Output 3.3: National capacity for pesticide inspections and post registration enforcement strengthened.

Inspection services (including Customs and Plant Health staff providing operational support) will be reinforced and equipped to carry out their function. The support will include training on the FAO Manual on Pesticide Inspection and establishment of an information exchange platform including PCB, Customs, health officials, agriculture and environmental officers, laboratory services, academia and other government and private sector players active in sound life cycle pesticide management.

Main Activities: The main activities to be implemented under this Output are:

A 3.3.1 Develop training material for the inspection and control of pesticides based on the technical regulations prepared (A 3.1.1);

A 3.3.2 Train 20 Customs and Plant Health staff on the enforcement of relevant post registration regulations of pesticides and data management tools (PSMS);

A3.3.3 Develop, validate and roll out an information exchange platform hosted by PCB to strengthen inter-governmental coordination and cooperation on hazardous chemical management.

Timeline for implementation: The training materials will be developed in Year 1 and the actual training will be done in phases in Year 2 and 3.

Component 4: Promotion of alternatives to POPs and other hazardous chemical pesticides

The component aims at increasing the sustainability of crop production reducing reliance on chemical management and increasing farming system resilience to environmental stresses such as pest attacks and climate change. In FFSs, farmers learn to conserve natural biological control processes which suppress pest problems and to respond to a changing environment and climate through an “adaptive management”. The FFS approach is in principle accepted in the country and FFSs have been organised since 2001 on crop production, land and water management. The local knowledge on pest ecology and biological control remain however limited and mostly theoretical, neither there has been an adequate investment to build the capacity of facilitators and farmers in the practice of FFSs. FFSs on Conservation Agriculture have been conducted in Kenya, Uganda, Zimbabwe and Zambia, but not yet in Malawi. This component is aimed at building a pilot FFS programme in four districts through the following step-wise implementation strategy:

1. Identification and analysis of a field problem as an entry point to FFSs. FFSs entirely depend on the buy-in of farmers to succeed. the collective analysis of a field “problem” is the best entry point at community level for the establishment of the programme. The first step will accordingly be a Participatory Rural Appraisal (PRA) in the project districts to analyse the causes leading to pest problems in crops with the highest pesticide use and to assess the current plant production practices;

2. Season-long Training of Trainers. The second building block of any FFS programme is the development of a cadre of strong facilitators with practical experience in facilitating experiential learning with farmers. The project will address the current lack of strong IPM FFS facilitators in the country by organising two season-long Training of Trainers (ToTs) one on cotton and one on cotton and vegetables (only *solanaceae* crops). The ToT curriculum will be modular, field-oriented and

residential for the critical stages of the crops. Participants will be drawn from the extension service, the co-financing NGO Self Help Africa and the cotton companies to diversify the FFS implementation modalities. Regional expertise will be mobilised in particular in year 1 to act as Master Trainers in the first ToT and opportunities to participate in regional activities, such as the Regional FFSs workshop currently under planning in the Southern African region, provided to national project staff. The ToT curriculum will incorporate elements of IPM, Conservation Agriculture with social topics, specifically in the area of decent work;

3. Establishment of Farmer Field Schools. Practice FFSs (4-8) will be organised as part of the ToT curriculum in nearby villages to provide hands-on experience to trainees. After completion of the first ToT, newly graduated FFS facilitators will organise 20 FFSs in each of year 2 and 3 of the project in three districts (*Salima, Shire Valley and Machinga*). FFS facilitators with a suitable attitude and particularly successful in the training programme will be encouraged to serve as master trainers in the second ToT. Additional skill development trainings will be provided by the project to refine their facilitation skills. Towards the end of the project, the farmer-to farmer training will be explored;

4. Monitoring and Evaluation and communication. A specific M&E plan for this component will be developed at the start of the project to set impact targets, monitor progress, feedback into implementation strategies and finally assess the effectiveness of the different implementation modalities. The M&E will include classic extractive impact assessment methodology (like surveys to produce hard data on tangible changes) as well as more participatory, process-oriented tools designed to strengthen farmers' knowledge, attitude and interpersonal skills. Field open days and exchange visits between FFS groups will also be part of the communication and dissemination strategy. In particular, exposure visits of policy-makers to successful FFSs is a powerful tool to gain political support for scaling up of FFS programme;

5. Post-FFS follow activities. As a result of the FFSs training and its investment in the social and human capitals, FFS groups often live beyond the school completion. FFS programmes implemented in various regions have developed their own post-FFS modalities; some examples are the farmers Community Listeners' Clubs congregating over radio programmes in West Africa to exchange information and coordinate community action or the farmer water management institutions created in India to represent farmers in negotiation around water policies with the Government. These developments require at least a few years of project implementation and they are hard to predict or plan as they are determined by the socio-economic and cultural context in which the FFSs are conducted. The project can however play an important role in facilitating group networking and providing opportunity for growth

Outcome 4 IPM alternatives to conventional pesticides successfully promoted and the use of chemical pesticides and highly hazardous pesticides reduced through Farmer Field Schools.

Activities will build on the experience of the Farmer Study Groups (FSG) which were established under the TCP and the collaborations laid out with the civil society and commodity companies during the formulation phase. A baseline survey will be undertaken to identify current pest and pesticide management practices and yield levels, identify HHPs and pesticide direct and indirect exposure on vegetable and cotton. The major pest problems on targeted crops leading to heavy use of pesticides will be assessed along with the current farm practices and needs for alternative options such biological control agents. This assessment will also include an analysis of agro-climatic trends and their potential impact on crop productivity and protection. The baseline survey will also include sampling of agricultural produce to test for pesticide residue levels to determine immediate threats to food safety. Findings from the assessment will inform the development of an integrated training curriculum addressing social and environmental improvements. On the social impacts, FFS will raise the awareness of the farming community on the negative effects of direct and indirect pesticide

exposure of children. This outcome will include participation in regional FFS workshops/training and the mobilisation of expertise from the region. If found feasible, study group members will also include some children/youth above the minimum age of employment but below the age of 18, as this particular age group is vulnerable to be engaged in hazardous child labour, while alternatives to chemicals can in some situations help to convert hazardous child labour into decent youth employment.

Output 4.1 IPM FFS implementation strategy validated with key stakeholders

A general implementation plan for FFSs has been developed during the PPG in close consultation with the government. The plan identifies the key crops and districts based on the FSG experience. The operationalization of this plan will require further planning with the Department of Agriculture and the collaborating partners to define location and duration of the activities, roles and implementation responsibilities. This preparation phase will also include extensive interaction with the farming community of the districts selected for FFS implementation.

Main Activities: The main activities to be implemented under this Output are:

A 4.1.1 Organise start off meetings and field visits with key stakeholders, namely DAES, DCD, DARS, SHA, Cotton Companies, Farmers' Union and related FAO projects to validate an FFS implementation workplan

Output 4.2 Capacity Building on IPM FFS on cotton and vegetables, and post-harvest training on maize in 3 ADDs (Salima, Shire Valley and Machinga)

The quality FFSs highly depends on skilled, knowledgeable facilitators who have gained experience through the practice of FFSs in the field. At present, a cadre of fully trained facilitators is not available in the country, therefore the first two years, the project will focus on building this capacity by organising two season-long Training of Trainers (ToTs) for extension providers from the Department of Agriculture and the collaborating NGOs. During the TCP, a short duration training (10 days) on FFSs principles and the practice of agro-ecosystem analysis (AESA) was carried out for 30 extension officers. The mobilization of expertise from the region and participation in regional FFS initiatives will be important mechanisms to develop this initial national capacity. FFS groups will then been established in the three districts. The selection of the FFS specific activities (e.g. crop, IPM, CA practices) within the area of sustainable crop intensification will depend on local peoples' priority.

Main Activities: The main activities to be implemented under this Output are:

A 4.2.1: Carry out an assessment of the major pest problems on targeted crops leading to heavy use of pesticides, including HHPs, current farm practices and needs for alternative options such biological control agents.

A 4.1.2: Develop and yearly review an integrated ToT/FFS training curriculum on IPM, Conservation Agriculture and Decent Work.

A 4.1.3: Organise Training of Trainers (2) to develop a cadre of national facilitators and Farmer Field Schools (40) to build farmers capacity on agro-ecological management of farming systems

Timeline for implementation: The assessment will be completed in Y1. The first TOT will be done in Year 1 and the second will be undertaken in Year 2. It is anticipated that the second ToT will run parallel with the first FFS. By year 3 all the FFS should be running.

Output 4.3 Communication and dissemination strategy to raise awareness on pesticide risks along the pesticide life cycle and to promote IPM

Documentation and dissemination of good practices and success stories are a continuous exercise in FFS programmes. A communication strategy will be developed at the start of the project targeting different audiences, from farmers to policy makers. A set of core messages will be agreed with key stakeholders in a consultative way and appropriate tools will be developed. FFS training material will be developed after the completion of the first ToT.

Main Activities: The main activities to be implemented under this Output are:

A4.3.1 Prepare and disseminate appropriate messages on pesticide risk reduction and sustainable intensification of agriculture that are target specific and use appropriate means. Specific material on vulnerable groups such as children and women will be developed. These will include: policy briefs, leaflets and radio messages.

A 4.3.2 Produce and disseminate a field-ecological guide for IPM FFS on cotton in the region collecting the experience of the FFSs.

Timeline for implementation: The target specific messages will be prepared in Year 1 and throughout implementation of the other components. The roll out of messages will start in Year 1 and will be an ongoing activity through Years 2 and 3.

Component 5: Monitoring and Evaluation

The objective of component 5 is to ensure a systematic results-based monitoring and evaluation of project progress towards achieving project outputs and outcome targets as established in the Project Results Framework as well as promote the wider dissemination of project results for replication. For the FFS component studies to evaluate changes in behaviour and practices are instrumental to ensure a continuous improvement. The M&E system will include participatory M&E tools and exercises.

Output 5.1: Development of a monitoring and evaluation plan inclusive of an impact assessment component on the social, economic and environmental sustainability of the project intervention. A framework to measure sustainability improvement in cotton production will be piloted

Output 5.2: Midterm and final evaluations carried out

Output 5.3: Project “best-practices” and “lessons-learned” disseminated via publications and other means to be identified in the communication strategy.

Time for implementation: 5.1 and 5.3 will be continuous, a mid-term evaluation will be conducted at project mid-term (after two years of implementation) and a final evaluation at project completion.

2.4 GLOBAL ENVIRONMENTAL BENEFITS

The main global environmental benefit the project will deliver is the disposal of up to 380t of POPs and other obsolete pesticides, and the remediation of one heavily polluted site, reducing the danger to human health and the existing risk of soil and water contamination.

Through improving container management and raising awareness among the general public about the risks inherent in re-using containers for domestic purposes, specifically for storing foodstuff and drinking water, project activities will further reduce the adverse impacts to human health.

To prevent future accumulation of POPs and obsolete pesticides the project will improve pesticide regulations and enhance capacity to implement them. By promoting and piloting IPM alternatives, and implementing a complementary communication strategy, the project will reduce the reliance of farmers on highly hazardous pesticides.

2.5 COST EFFECTIVENESS

Cost effectiveness will be achieved through: (i) building on existing capacity developed under previous and on-going initiatives implemented by FAO and other partners for all components (ii) exploring the opportunity to process tender documents for the disposal of all obsolete stocks within the contract prepared for the MEAs project to reduce transaction costs and the actual cost of disposal and (iii) employment of local or regional expertise when available iv) exploring local bioremediation options for low risk obsolete pesticide formulations such as the Skana dusts building on the successful micro pilot already done through the Clean Farms project.

2.6 INNOVATIVENESS

The project includes several innovative approaches to pesticide lifecycle management that are likely to be scaled up and replicated in neighbouring countries. Specifically, the planned activities to develop, and roll-out a container management system are innovative for Malawi and the region. The problem of container management is ubiquitous in Malawi and in neighbouring countries and currently without a long-term sustainable solution. The project activities aim to address this. Pilot schemes elsewhere related to more organized and centrally controlled institutions, but this project will establish a pilot embracing estate farming sector and less organized smallholder farmers which will require novel approaches in particular relating to communications and motivation of private and smallholder farmers to participate.

The institutionalization of a global Pesticide Stock Management System (PSMS) is also innovative. Such a system will allow for the control of Rotterdam Convention Prior Informed Consent (PIC) listed chemicals and POPs, allowing for a robust registration system for the first time. The project will also strive to achieve south-south cooperation through the possible use of the upgraded quality control laboratory by other countries in the region.

Furthermore, the project will develop and implement a communication strategy to raise awareness on pesticide risks targeting a wide spectrum of stakeholders from grassroots, especially women and children through to policy makers.

Finally, the project will implement and further develop an innovative mechanism to build an evidence base for project implementation through the baseline survey in the Machinga, Salima and Shire Valley ADDs. The baseline survey will yield robust data on actual practices in order to guide the work on alternatives and further activities to reduce pesticide risks. This same network will also serve as an information conduit (to promote other components particularly the container management pilot) and as a monitoring mechanism to track project progress and reduce pesticide risks at all stage.

3 FEASIBILITY

3.1 ENVIRONMENTAL IMPACT ASSESSMENT

The project is designed to have positive benefits to the environment through the removal of obsolete pesticides and risk reduction of contaminated sites together with the reduction in use of hazardous pesticides and the routine environmentally sound management of empty pesticide containers.

However in achieving these objectives, there is potential for environmental impairment particularly in the event of an accident in the removal and elimination of the obsolete pesticides. To mitigate these risks the project will follow FAO's Environmental Management Tool Kits (EMTK) for the assessment, safeguarding, transportation and disposal of obsolete pesticides. Environmental Management Plans (EMP) will be developed for the safeguarding activities that will consider all potential risks and develop mitigation strategies. The EMP will cover:

- repackaging of obsolete pesticides;
- safeguarding of stocks of obsolete pesticides
- collection, transportation and safe storage/handling of empty containers;
- transportation and intermediate storage of stocks of obsolete pesticides; and
- decontamination of heavily pesticide-contaminated sites.

The methodologies set out in the EMTK have been used in similar FAO projects since 2003 and no adverse environmental impacts have resulted. This project is therefore classified as Category B under FAO's guideline "Environmental Impact Assessment – Guidelines for FAO's field projects".

3.2 RISK MANAGEMENT

The following risks were identified during the PPG. Mitigation measures are proposed, and where appropriate, will be further elaborated in the EMP.

General project risks		
Risk	Ranking	Mitigation measures
Insufficient funds dedicated to the remediation of prioritized site and the disposal of POPs.	Medium	Budget estimates are based on rates for ongoing disposal activities. If there is a need for additional co-financing, it will be availed from project partners and related projects during project implementation.
Institutional arrangements pose challenges to project execution.	Low	Consultation meetings with stakeholders were held and implementation arrangements agreed during the preparation of the project. Institutional arrangements, including the roles and responsibilities of stakeholders will be confirmed again at the start of project implementation.
Increased pilferage of centralized stocks before repackaging and transportation for final	Medium	Consultation meetings held with SFFRFM to increase security at premises. Site securing and adequate training of staff at SFFRFM.

disposal		
Likelihood of political instability.	Low	Although there are currently no signs of unrest which could affect the project, this will be closely monitored during project implementation.
Extreme weather conditions such as torrential rain and floods	Low to medium	The Central stores holding the obsolete stocks are far from flood prone areas.
Component specific risks		
Component 1		
Environmental contamination from leakage of POPs and other obsolete pesticides due to poor conditions of containers	High	Management measures to be included in the EMP include field procedures to ensure no further leakage occurs during the project activities.
Continued government centralised procurement of pesticides through parastatal companies will give rise to re-accumulation of obsolete stocks	High	As part of component 3, government stakeholders will be engaged to develop pesticide policies that are more responsive to user demands and avoid large-scale procurements. Under Component 4 there will be communication strategies aimed at policy makers.
Lack of appropriate storage for safeguarded stocks	Low	Central stores conforming to FAO EA guidelines already identified and currently holding CLI safeguarded stocks in Lilongwe and Blantyre
Local treatment of Skana Dusts not successful or are incomplete leading to leakage and runoff	Low	Recommendation for bioremediation to be based on product test results. Treatment according to researched method; use runoff and leachate control system
Incidents during safeguarding	High	All staff / enterprise of the project engaged in safeguarding operations have been trained; and training will be refreshed in PY1. All workers will be provided with protection gear by the international contractor. Strict application of measures included in Environmental Management Plan (EMP) and Health and Safety Plans.
Delays in the procurement of equipment necessary for the disposal	Low	Equipment to be supplied as part of international contract. Contractor to provide all necessary documents to GoM to allow timely import.
Government authorities disagree with the strategy for the reduction of risks posed by contaminated sites	Medium	Strategy will be developed based on objective data and options presented to government for endorsement. EAD has been involved in disposal and remediation plans from the beginning.
Delays in administrative procedures / decisions as regards transport of obsolete stocks	Medium	Administrative procedures have slowed down clearances process during the TCP implementation. Guidance of the competent Government authority as regards to procedures of the Basel Convention has been provided. Protocols followed during transportation of methyl bromide cylinders prior to disposal during the TCP will be followed.
Component 2		

Technical staff being exposed to pesticides during collection and repacking of empty containers	Low to medium	Training modules on collection techniques for the safe collection, repackaging and storage of wastes will be executed, and Personal Protection Equipment (PPE) provided for all personnel involved in container collection.
Lack of stakeholder involvement in proper disposal of empty containers and in the establishment of a sustainable system for the management of wastes.	Low	An awareness campaign and communication strategy will be put in place on safe disposal of empty containers
Component 3		
Delayed adoption of updated legislation. Law making (including promulgation of regulations) is a prerogative of the State and will depend on the will of the legislature or law-making authority to enact legislation	Medium	Continued sensitization will be conducted during project execution including national training sessions and stakeholder meetings including awareness raising targeting policy makers.
Component 4		
Loss of IPM FFS facilitators after investment on ToT	Medium	Project to enter into firms agreements with facilitators institutions of origin (DAES and DCD); Adopt the lead farmer strategy where farmers are trained to be facilitators. If found feasible, FFS study group members will also include some children/youth above the minimum age of employment but below the age of 18, as this particular age group is vulnerable to be engaged in hazardous child labour, while alternatives to chemicals can in some situations help to convert hazardous child labour into decent youth employment
Climate Change Changes in the climate will impact on pest distribution, activity, seasonal appearance, as well as impact on the behaviour of chemicals in the environment.	Medium	The project has forged a link with NGOs such as Self Help Africa promoting organic farming and FFS; is being cofinanced by FAO projects promoting resilience and CSA and is building onto existing community based initiatives in close collaboration with DAES. These links will allow the project to learn directly from farmers about the specific climate impacts on production, and the project will document and encourage sharing of knowledge on climate resilient forms of pest control.

4 IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS

4.1 INSTITUTIONAL ARRANGEMENTS

The Ministry of Agriculture, Irrigation and Water Development will be the main executing agency responsible for the coordination and management of project activities through a Project Management Unit that will be hosted within the Pesticide Control Board (PCB) or as validated upon project inception. To allow for the involvement of other key ministries in the management of the project, stakeholders agreed during the preparation phase to have a Project Steering Committee (PSC). The PSC will be composed of representatives from Government, private sector, academia and NGOs including Farmer Organizations. This committee will support the project by monitoring the quality and timeliness of implementation of project activities, and propose adjustments as necessary. A special request made at the validation workshop of the project document was to ensure the PSC remains lean and be comprised of only key stakeholders as validated at project inception.

4.2 IMPLEMENTATION ARRANGEMENTS

FAO's Role

FAO will be the GEF Agency for the project responsible for the overall supervision and to ensure that GEF policies and criteria are adhered to and that the project meets its objectives and achieves expected outcomes in an efficient and effective manner. FAO will also be responsible for the financial execution of the project, including procurement of goods and services for the project in consultation with project partners based on annual work plans and budgets approved by the PSC.

FAO will report on project progress to the GEF Secretariat; financial reporting will be to the GEF Trustee. FAO will closely monitor the project and provide technical support (through FAO's Agriculture and Consumer Protection Department and other technical divisions) and carry out supervision missions.

As the GEF agency for the project, FAO will:

- Manage and disburse funds from GEF in accordance with FAO rules and procedures;
- Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers and the rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all activities;
- Carry out at least one supervision mission per year;
- Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, on project progress and provide financial reports to the GEF Trustee.

The **FAO Representative in Malawi** will be the Budget Holder (BH) responsible for the timely operational, administrative and financial management of the project. She, working closely with the PMU, the FAO Lead Technical Officer and Lead Technical Unit, will be responsible for:

- a) Management of GEF resources in accordance with the Project Document, and approved Annual Work Plans and Budgets;
- b) Procurement of goods and contracting of services for the GEF component of the project and financial reporting in accordance with FAO rules and procedures;

Preparation of annual/six-monthly budget revisions, as required, for submission to the LTO/LTU and the GEF Coordination Unit; Preparation of six-monthly financial reports to be submitted to the GEF Unit and shared with the executing partners and the PSC;

The BH will also be responsible for reviewing and giving no-objection to Annual Work Plans and Budgets (AWP/B), Project Progress Reports and co-financing reports submitted by the Project Management Unit, in consultation with the FAO Lead Technical Officer (LTO), Lead Technical Unit (LTU) and the GEF Coordination Unit.

The FAO Project Task Force (PTF): The BH will establish a multi-disciplinary PTF to support the project. Members of the task force will be responsible for supervision of activities in their area of technical competence in collaboration with the LTO and BH.

The FAO Lead Technical Unit (LTU): The Pesticide Risk Reduction Group in the Plant Production and Protection Division (AGP) of the Agriculture and Consumer Protection Department will be the FAO Lead Technical Unit (LTU) for this project. The LTU will support a Lead Technical Officer¹ (LTO), in providing technical advice and backstopping in consultation with other teams in AGP and FAO. The LTO, supported by the LTU, will:

- a) Review and provide clearance to TORs for consultancies, LOAs and contracts, in consultation with the LTU and relevant technical officers in FAO;
- b) Participate in the selection of consultants and firms to be hired with GEF funding;
- c) Review and provide technical comments to draft technical products/reports and, as necessary, ensure clearance by relevant FAO technical officers of final technical products delivered by consultants and contract holders financed by GEF resources before the final payment can be processed;
- d) Review and approve project progress reports submitted by the Project Management Unit to the BH;
- e) Support the BH in reviewing, revising and giving no-objection to AWP/B to be approved by the Project Steering Committee;
- f) Prepare the annual Project Implementation Review (PIR) report, with inputs from the Chief Technical Adviser, to be submitted to the LTU and the GEF Coordination (TCI) for clearance. The PIR will subsequently be submitted to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio;
- g) Field annual (or as needed) technical support and backstopping missions;
- h) With the LTU, review and clear TORs for the mid-term evaluation, participate in the mid-term workshop with all key project stakeholders, development of an eventual agreed adjustment plan in project execution approach, and supervise its implementation;
- i) With the LTU, review and clear TORs for the final evaluation, participate in the final project closure workshop with all key project stakeholders and the development of and follow up on recommendations on how to insure sustainability of project outputs and results after the end of the project.

The **GEF Coordination Unit** in the Investment Centre Division (TCI) will review and approve project progress reports, annual project implementation reviews (PIRs) and financial reports and budget revisions. The unit will also participate in the mid-term and final evaluations and the development of corrective actions to mitigate eventual risks affecting the timely and effective implementation of the

¹ To be designated from FAO regional/sub-regional office

project. The GEF Coordination Unit will, in collaboration with the FAO Finance Division, request transfer of project funds from the GEF Trustee based on 6 monthly projections.

The **FAO Finance Division** will clear budget revisions, provide annual Financial Reports to GEF and, in collaboration with the GEF Coordination Unit, call for project funds on a six-monthly basis from the GEF.

The **Ministry of Agriculture and Irrigation** through its dedicated body to pesticide management and control, the **Pesticide Control Board**, will chair a multi-stakeholder Project Steering Committee (PSC) which will bring together key institutions including the Government Ministries (Department of Agricultural Extension Services (DAES) DCD (Department of Crop Development (DCD), Department of Agricultural Research Services (DARS) , Environmental Affairs Department (EAD), Malawi Bureau of Standards (MBS), industry (CropLife Malawi and Great Lakes Cotton Company (GLCC), academia (Bunda College of Agriculture), farmer associations (FUM) and key non-government organizations (NGOs) working on alternatives to pesticides and related activities such as SelfHelpAfrica (SHA). During the project preparation, consultations were held with other development agencies with related projects in Malawi. These agencies will be invited to participate in the stakeholder workshops to ensure coordination of the project with key related initiatives.

The **Project Steering Committee** will be the policy setting body with regard to all issues affecting the achievement of the project's objectives. The PSC will be responsible for providing general oversight of the project's implementation and will ensure that all activities agreed upon under the GEF project document, are adequately prepared and carried out. In particular, it will:

- a) Provide guidance to the PMU in the execution of the project;
- b) Ensure that all project outputs are in accordance with the project document;
- c) Review, amend if appropriate, and approve any proposed revisions to the project - project results framework and implementation arrangements;
- d) Review, amend (if appropriate) and endorse all Annual Work Plans and Budgets;
- e) Review project progress and achievement of planned results as presented in six-monthly Project Progress Reports, Project Implementation Reviews (PIRs) and Financial Reports;
- f) Provide inputs to the mid-term and final evaluations, review findings and provide comments;
- g) Advise on issues and problems arising from project implementation, submitted for consideration by the Project Management Unit or by various stakeholders; and
- h) Facilitate cooperation between all project partners and facilitate collaboration between the project and other relevant programmes, projects and initiatives in the country.

PSC meetings will normally be held annually, but the Chairperson will have the discretion to call additional meetings if necessary. Meetings of the PSC will not necessarily require physical presence and could be undertaken electronically. The PMU will act as Secretariat to the PSC and be responsible for providing PSC members with all required documents in advance of PSC meetings, including the draft Annual Work Plan and Budget and any significant technical proposals or analyses. The PMU will prepare written report of all PSC meetings and be responsible for logistical arrangements related to the holding of such meetings, supported by FAOR Malawi as the Budget Holder.

PCB will be the lead national executing partner and will host the **Project Management Unit (PMU)**, which will be staffed by a part time Chief Technical Adviser (CTA), a full time National Project Coordinator supported by short term consultants; an Operations Officer, a part-time

Communications/Visibility Officer and a part-time M&E officer. The NPC will ensure coordination and communication between the PCB and the PMU.

The **Chief Technical Adviser (CTA)** working under the technical guidance of AGPMC, and direct supervision of the FAOR Malawi, will assist the NPC in his/her coordination role. The main task of the CTA will be to build the capacity of the NPC to effectively and efficiently manage the project with respect to the technical workplan and the financial resources, monitor its progress and take remediation actions to address implementation issues. Drawing lessons from the TCP and PPG implementation, the CTA will work closely with the NPC to ensure sound project management, budget control and adherence to set timelines. The ToRs are in Appendix 4

In close consultation with the PSC, FAO and other partners involved in the execution of project components the PMU will:

- a) Act as secretariat to the PSC;
- b) Organize project meetings and workshops, as required;
- c) Prepare Annual Work Plans and detailed Budgets (AWP/B) and submit these for approval by FAO and the PSC;
- d) Coordinate and monitor the implementation of the approved AWP/B;
- e) During project inception period, review the project's M&E plan and propose refinements, as necessary, and implement the plan;
- f) Prepare the six-monthly Project Progress Reports (PPRs) and give inputs in the preparation of the annual Project Implementation Review (PIR) by the FAO Lead Technical Officer. Ensure that all co-financing partners provide information on co-financing disbursed during the course of the year for inclusion in the PIR;
- g) Coordinate the project with other related on-going activities and ensure a high degree of inter-institutional collaboration; and
- h) Assist in the organization of midterm and final evaluations.

With regard to the execution of technical components, CropLife Malawi will be in charge of execution of components 1 and 2. PCB will be responsible for execution of component 3, supported by national/international consultants. The Department of Crop Development in the MoAIWD will be responsible for execution of Component 4 and will implement this component in close liaison with DAES.

Other executing partners

The project will be implemented through collaboration with partners who will contribute to the execution of specific components/outputs. During project preparation the partners were identified for their institutional mandates and technical expertise. Involvement of these partners will enhance stakeholder participation, ensure optimal utilization of networks and skills already built as well as fostering sustainability of results post project.

CropLife Malawi (CLM): CLM will lead implementation of components 1 and 2 (Disposal and safeguarding activities and Container Management respectively). The Environmental Affairs Department (EAD) will be a key collaborator in implementation of Components 1 and 2.

Pesticides Control Board (PCB): Other than being the lead institution for the whole project implementation; PCB will lead the implementation of Component 3. The Malawi Bureau of Standards (MBS) and EAD will be key collaborators.

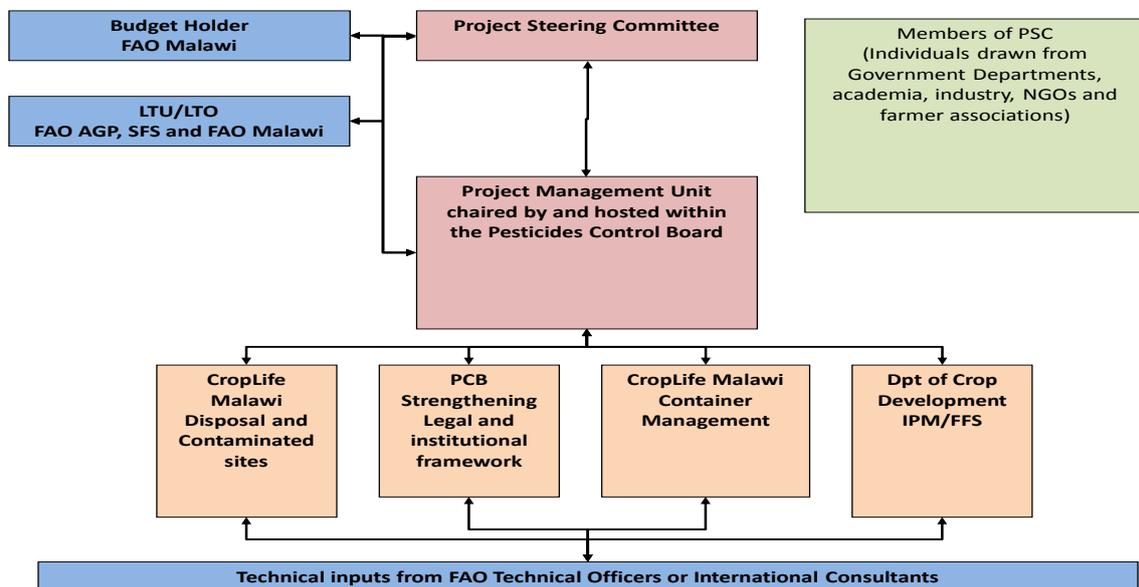
Department of Crop Development (DCD) will lead implementation of Component 4 in very close collaboration with DAES. The project will strengthen synergies with the Child Labour Project to

reduce pesticide risks to children especially in awareness raising and development of safer alternatives (Outputs 4.2 and 4.3). The Great Lakes Cotton Company (GLCC) is working with over 1000 cotton farmers in the country, some in the same Agricultural Development Divisions (ADDs) as the project and will work closely with the project to implement Component 4. As part of their cofinancing, SelfHelp Africa will be close collaborators for implementation of Component 4.

The project will work closely with other ongoing programmes on CSA, Resilience building and CA in the implementation of Component 4.

NGOs such as SHA’ private sector including CropLife Malawi as well as Farmer Organizations such as the Farmers’ Union of Malawi will also be key executing partners.

The institutional arrangements of the components and project management mechanisms are schematized in the Figure 2 below:



4.3 FINANCIAL PLAN

Financial plan (by component, outputs and co-financier)

USD																	
Component	Output		Croplife	Croplife	SelfHelpAfrica	PCB	MBS	EAD	MAI	MAI	FAO	FAO	Total	%	Total	%	Grand Total
			in-kind	Grant	Grant	In Kind	in-kind	In kind	In Kind	Grant	Inkind	Grant	co-financing	co-financing	GEF	GEF	
1	1.1	Stategy development						100,000					100,000	68%	48,000	32%	148,000
	1.2	Safeguard+ Disposal		1,250,000		243,854						815,146	2,309,000	66.6%	1,157,000	33.4%	3,466,000
	1.3	Contaminated sites				180,000		180,000				50,000	410,000	75.0%	136,700	25.0%	546,700
2	2.1	Container Management piloted in Blantyre and Lilongwe				150,000		80,000					230,000	52.8%	206,000	47.3%	436,000
	2.2	Handover of pilot scheme to operator	50,000									80,000	130,000	62.5%	78,000	37.5%	208,000
3	3.1	Legislation development				200,000						100,000	300,000	82.3%	64,500	17.7%	364,500
	3.2	National Strategy for inspection and Q/C				90,000	250,000						340,000	89.2%	41,000	10.8%	381,000
	3.3	Capacity building for post registration enforcement enhanced				100,000						200,000	300,000	82.9%	62,000	17.1%	362,000
4	4.1	Alternatives to POPs, HHPs and other chemical pesticides identified and tested			991,937	50,000	100,000			350,000			1,491,937	94.2%	92,500	5.8%	1,584,437
	4.2	Extension officers and farmers trained in IPPM using FFS approach			103,816				380,000	1,000,000		3,129,015	4,612,831	95.5%	220,000	4.6%	4,832,831
	4.3	Communication strategy on pesticide risks and IPM benefits developed and implemented			62,606	100,000				893,000			1,055,606	90.6%	110,000	9.4%	1,165,606
5	5.1	M&E									100,000	200,000	300,000	61.2%	190,000	38.8%	490,000
6	6.1	Project Management									300,000		300,000	67.5%	144,300	32.5%	444,300
Grand Total			50,000	1,250,000	1,158,359	1,113,854	350,000	360,000	380,000	2,243,000	400,000	4,574,161	11,879,374	83.3%	2,550,000	17.7%	14,429,374

GEF inputs

The majority of GEF funds (USD 1,341,700) are allocated to the safe disposal of POPs and the remediation of contaminated sites. To support the sustainability of the project's key results and prevent future accumulation of POPs and obsolete pesticides, the second largest allocation of GEF funds is to promoting less toxic alternatives (USD 422,500). Funds are also allocated to the development of a sustainable container management system (USD 284,000), and to the legislative framework and institutional capacity for enforcement of pesticide regulations (USD 167,500).

Government inputs

The Government of Malawi (GoM) will provide cash and in-kind co-financing in the form of sites and stores for safeguarding and temporary storage of inventoried stocks awaiting their shipment for incineration; the preparation and facilitation of all paper work required under the Basel Convention for transboundary movement of hazardous wastes; the provision of national teams for the preparation of the EA and EMPs and the supervision of disposal; a national team for sites remediation; contribution to the container management infrastructure and operation including the provision of transport and intermediate and final collection centres for processing empty pesticides containers, the national laboratory and staff for pesticide contamination analysis. The Government is also providing cofinance through ongoing Food Security, the APPSA and IFAD funded IPM Research, the FICA Extension capacity Building and Climate change adaptation programmes. The Government will contribute to the promotion of alternatives to hazardous pesticides in the form of in-kind staff time. In addition, GoM will provide in-kind cofinancing to support project management including office space for the Project Management Unit.

FAO inputs

FAO is cofinancing the project through; the two phases of the EC-funded project on Multi-lateral Environmental Agreements and emergency assistance from Joint UN missions for management of migratory pests for Component 1; the TCP to strengthen pest and pesticide management capacity in Malawi and the Child labour project for component 3; the Malawi Resilient households project; the Tripartite Climate Smart Agriculture project and the grant from the Government of Flanders to improve food security for components 4, 5 and 6. FAO will also provide in-kind co-financing comprising staff time to support capacity building/training activities under each of the four technical components.

Other co-financiers inputs

Crop Life International will co-finance the safeguarding and disposal of obsolete stocks.

Self Help Africa will cofinance activities in support of promotion of alternatives to chemical control and Farmer Field Schools.

4.4 FINANCIAL MANAGEMENT AND REPORTING ON GEF RESOURCES

FAO will maintain a separate account in USD for the Project GEF resources showing all income and expenditures. Expenditures incurred in a currency other than USD will be converted into USD at the United Nations operational rate of exchange on the date of the transaction. FAO shall administer the GEF resources in accordance with its regulations, rules and directives.

Financial reports

FAO Malawi as the BH will prepare six-monthly Project expenditure accounts and final accounts for the Project GEF resources, showing amount budgeted for the year, amount expended since the beginning of the year, and separately, the unliquidated obligations as follows:

- Details of project expenditures on an output-by-output basis, reported in line with Project budget codes as set out in the Project Document, as at 30 June and 31 December each year.
- Final accounts on completion of the Project on an output-by-output cumulative basis, reported in line with Project budget codes as set out in the Project Document.
- A final statement of account in line with FAO Oracle Project budget codes, reflecting actual final expenditures under the GEF component of the Project, when all obligations have been liquidated.
- An annual budget revision will be prepared by the BH in consultation with the LTO and LTU and submitted for approval to the FAO GEF Coordination Unit.

The BH will submit the financial reports for review and monitoring by the LTU, and the FAO GEF Coordination Unit. Financial reports for submission to the GEF will be prepared in accordance with the provisions in the GEF Financial Procedures Agreement and submitted by the FAO Finance Division.

Responsibility for cost overruns

The BH is authorized to enter into commitments or incur expenditures up to a maximum of 20 percent over and above the annual amount foreseen in the GEF component of the Project budget under any budget sub-line provided the total cost of the annual budget is not exceeded.

Any cost overrun (expenditure in excess of the budgeted amount) on a specific budget sub-line over and above the 20 percent flexibility should be discussed with the FAO GEF Coordination Unit with a view to ascertaining whether it will involve a major change in Project scope or design. If it is deemed to be a minor change, the budget holder shall prepare a budget revision in accordance with FAO standard procedures. If it involves a major change in the Project's objectives or scope, a budget revision and justification should be prepared by the BH for discussion with the GEF Secretariat.

Savings in one budget sub-line may not be applied to overruns of 20 percent in other sub-lines even if the total cost remains unchanged, unless this is specifically authorized by the FAO GEF Coordination Unit upon presentation of the request. In such a case, a revision to the Project Document amending the budget will be prepared by the BH.

Under no circumstances can expenditures exceed the approved total Project budget for the GEF resources or be approved beyond the completion (NTE) date of the Project. Any over-expenditure is the responsibility of the BH.

Audit

Project GEF resources will be subject to the internal and external auditing procedures provided for in FAO financial regulations, rules and directives and in keeping with the Financial Procedures Agreement between the GEF Trustee and FAO.

The audit regime at FAO consists of an external audit provided by the Auditor-General (or persons exercising an equivalent function) of a member nation appointed by the governing bodies of the Organization and reporting directly to them, and an internal audit function headed by the Inspector-General who reports directly to the Director-General. This function operates as an integral part of the Organization under policies established by senior management, and furthermore has a reporting

line to the governing bodies. Both functions are required under the Basic Texts of FAO, which establish a framework for the TOR of each. Internal audits of imprest accounts, records, bank reconciliation and asset verification take place at FAO field and liaison offices on a cyclical basis.

PROCUREMENT

Goods and services will be procured in accordance with FAO's regulations, rules, procedures, and administrative instructions for procurement and finance. A procurement plan shall be prepared following the approval of the project (inception phase).

4.5 MONITORING, EVALUATION AND REPORTING

Oversight and reviews

Project oversight will be carried out by the CTA, PSC and FAO. Project oversight will be facilitated by: (i) documenting project transactions and results through traceability of related documents throughout the implementation of the project; (ii) ensuring that the project is implemented within the planned activities applying established standards and guidelines; (iii) continuous identification and monitoring of project risks and risk mitigation strategies; and (iv) ensuring project outputs are produced in accordance with the project results framework. At any time during project execution, underperforming components may be required to undergo additional assessments, implementation changes to improve performance or be halted until remedies have been identified and implemented.

Project revisions

The following types of revisions may be made to this project document with no-objection from the PSC and the approval of FAO GEF Coordination Unit in consultation with the LTO, LTU and BH:

- Minor revisions that do not involve significant changes in the immediate objectives and outputs of the project, but are caused by the rearrangement of inputs already agreed to or by cost increases due to inflation. These minor amendments are changes in the project design or implementation that could include, inter alia, changes in the specification of project outputs that do not have significant impact on the project objectives or scope, changes in the work plan or specific implementation targets or dates, renaming of implementing entities, or reallocation of grant proceeds not affecting the project's scope.
- Revisions in, or addition of, any of the annexes of the project document.
- Mandatory annual revisions which rephrase the delivery of agreed project inputs or take into account expenditure flexibility.

All minor revisions shall be reported in the annual Project Implementation Reviews (PIRs) submitted by FAO to the GEF Secretariat and the GEF Evaluation Office.

Monitoring responsibilities

Monitoring and evaluation (M&E) of progress in achieving project results and objectives will be done based on the targets and results indicators established in the project results framework and the annual work plans and budgets. M&E activities will follow FAO and GEF monitoring and evaluation policies and guidelines. The M&E plan, which has been budgeted at USD 190,000 will be reviewed and updated during the project inception phase. This will involve: (i) review of the project's results framework; (ii) refining of outcome indicators; (iii) identification of missing baseline information and action to be taken to collect the information; and (iv) clarification of M&E roles and responsibilities

of project stakeholders. The project's M&E system will be put in place within the first 6 months of project implementation. A part-time M&E consultant will be responsible for this activity.

The day-to-day monitoring of the project implementation will be the responsibility of the Project Management Unit led by the National Project Coordinator and driven by the preparation and implementation of annual work plans and budgets (AWP/B) and six-monthly project progress reports (PPRs). The CTA will assist and support the NPC in performing his/her tasks and ensure that monitoring is performed in an efficient and effective way. The preparation of the AWP/B and six-monthly PPRs will represent the product of a unified planning process between main project partners. As tools for results-based-management (RBM), the AWP/B will identify activities proposed for the coming project year and provide the necessary details on output targets to be achieved, and the PPRs will report on the monitoring of the implementation of activities and the achievement of output targets. An annual project progress review and planning meeting should be organized by the Project Management Unit with the participation of representatives from key executing partners prior to the Project Steering Committee Meeting. The AWP/B and PPRs will be submitted to the PSC for approval (AWP/B) and Review (PPRs) and to FAO for approval. The AWP/B will be developed in a manner consistent with the project's Results Framework to ensure adequate fulfilment and monitoring of project outputs and outcomes.

Indicators and information sources

To monitor project outputs and outcomes including contributions to global environmental benefits specific indicators have been developed in the Results Framework (see Annex 1). The framework's indicators and means of verification will be applied to monitor both project performance and impact. Following FAO's monitoring procedures and progress reporting formats, data collected will be of sufficient detail to be able to track specific outputs and outcomes and flag project risks early on. Output target indicators will be monitored on a six-monthly basis and outcome target indicators will be monitored on an annual basis if possible or as part of the mid-term and final evaluations.

Monitoring information sources will be evidence of outputs (reports, website, farmer surveys, lists of participants in training activities, manuals etc.). To assess and confirm the congruence of outcomes with project objectives, physical inspection and/or surveying of activity sites and participants will be carried out. This latter task would often be undertaken by the Project Management Unit supported by the FAO LTO and LTU.

Reports and their schedule

The specific reports that will be prepared under the M&E program are the: project inception report; Annual Work Plan and Budget (AWP/B); Project Progress Reports (PPRs); annual project implementation review (PIR); technical reports; co-financing reports; and a terminal report. In addition, assessment of the GEF POPs tracking tool against the baseline will be required at mid-term and final evaluation.

Project Inception Report: After FAO approval of the project and signature of the FAO/Government Cooperative Programme (GCP) Agreement, the project will initiate with a six month inception period. An inception workshop will be held and immediately after the workshop, the Chief Technical Adviser and the National Project Coordinator will prepare a project inception report in consultation with the FAO LTO and other project partners. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed First Year Annual Work Plan and Budget

(AWP/B) and a supervision plan with all monitoring and supervision requirements. The draft report will be circulated to FAO and the Project Steering Committee for review and comments before its finalization. The report should be cleared by the FAO BH (FAO Malawi), LTO, LTU and the FAO GEF Coordination Unit and uploaded in FPMIS by the BH.

Annual Work Plan and Budget (AWP/B): The National Project Coordinator will submit to the FAO LTO an Annual Work Plan and Budget. The AWP/B, divided into monthly timeframes, should include detailed activities to be implemented and outputs (targets and milestones for output indicators) to be achieved during the year. A detailed project budget for the activities to be implemented during the year should also be included together with all monitoring and supervision activities required during the year. The draft AWP/B is circulated to and reviewed by the FAO Project Task Force, Project Coordinator incorporates eventual comments and the final AWP/B is sent to the PSC for approval and to FAO BH for final no-objection and upload in FPMIS by the GEF Coordination Unit.

Project Progress Reports: One month before the mid-point of each project year, the Project Coordinator will prepare a semi-annual Project Progress Report (PPR). The report will contain the following: (i) an account of actual implementation of project activities compared to those scheduled in the AWP/B; (ii) an account of the achievement of outputs and progress towards achieving project objectives and outcomes (based on the indicators contained in the results framework); (iii) identification of any problems and constraints (technical, human, financial, etc.) encountered in project implementation and the reasons for these constraints; (iv) clear recommendations for corrective actions in addressing key problems resulting in lack of progress in achieving results; (v) lessons learned; and (vi) a revised work plan for the final six months of the project year. The report will also include an estimate of cofinancing received from all co-financing partners.

The PPR will be submitted by the National Project Coordinator to FAO no later than one month after the end of each six-monthly reporting period (30 June and 31 December). The draft PPR will be reviewed and cleared by FAO (BH and LTO). The LTO will submit the PPR to the GEF Coordination Unit for final clearance. The final PPR will be circulated by the BH to the PSC.

Project Implementation Review: The LTO supported by the FAO LTU, with inputs from the National Project Coordinator will prepare an annual Project Implementation Review (PIR) covering the period July (the previous year) through June (current year). The PIR will be submitted to the GEF Coordination in TCI for review and approval no later than 31 July. The GEF Coordination will submit the final report to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio.

Technical Reports: Technical reports will be prepared to document and share project outcomes and lessons learned. The drafts of any technical reports must be submitted by the National Project Coordinator to the FAO BH in Benin who will share it with the LTO for review and clearance, prior to finalization and publication. Copies of the technical reports will be distributed to the Project Steering Committee and other project partners as appropriate. These will be posted on the FAO FPMIS by the LTO.

Co-financing Reports: The National Project Coordinator will be responsible for collecting the required information and reporting on in-kind and cash co-financing provided by all co-financing partners. The Project Coordinator will provide the information in a timely manner and will transmit such information to FAO. The co-financing reports should be completed as part of the semi-annual PPRs and annual PIRs.

GEF-5 Tracking Tools: Following the GEF policies and procedures, the tracking tools for POPs will be submitted at three moments: (i) with the project document at CEO endorsement; (ii) at project mid-term evaluation; and (iii) at final evaluation. These should be completed by Project Coordinator with support from the LTO at mid-term and final evaluation.

Terminal Report: Within two months before the project completion date, the National Project Coordinator will submit to FAO a draft Terminal Report, including a list of outputs detailing the activities taken under the Project, “lessons learned” and any recommendations to improve the efficiency of similar activities in the future. This report will specifically include the findings of the final evaluation as described above.

Monitoring and evaluation plan summary

Monitoring of project progress will be against indicators identified in the project logical framework. These indicators will be further refined, as necessary, in consultation with project stakeholders during the project inception phase. This process of further collaborative refinement of project indicators will facilitate greater stakeholder engagement with the project and support broader monitoring and reporting of project achievements and failures.

The monitoring and evaluation plan is summarized below.

Type of monitoring and evaluation activity	Responsible parties	Time frame	Budget
Inception Workshop	Chief Technical Adviser (CTA), National Project Coordinator (NPC), Project Steering Committee, FAO (FAO Malawi as Budget Holder - BH, FAO Lead Technical Officer and Technical Unit- LTO and LTU, FAO GEF Coordination Unit).	Within first two months of project start up.	USD 22,500
Inception report	CTA with inputs from project partners.	Immediately after the project inception workshop	USD 2,500
	Cleared by FAO LTO, LTU, BH and the FAO GEF Coordination Unit, and the Project Steering Committee.		
Technical coordination and oversight	CTA	Continuously	USD 20,000
Design and implementation of monitoring and evaluation system, including staff training	M&E with support from the CTA and FAO LTO and LTU.	Within the first six months after the project inception	USD 8,500

Field-based impact monitoring	M&E expert with support from NPC–local NGOs, farmers/producers associations.	Continually	USD 11,500
Incorporation of M&E results into communication material	Communication and M&E experts	Twice in the project duration	USD 12,950
Technical support and backstopping missions	FAO LTO/LTU.	Annual or as required.	Paid by GEF Agency fee
Supervision missions	Independent missions organized by TCI/GEF Coordination Unit	Annual or as necessary	Paid by GEF Agency fee
Project progress reports (PPRs)	CTA in collaboration with NPC	Six- monthly	USD 10,000
	Submitted to the BH and LTU for clearance. Finalized reports submitted to the FAO GEF Unit by the LTO, and to the PSC by the PC.		
Project Implementation Review (PIR)	FAO LTO with inputs from the NPC, BH and LTU. Submitted by the FAO GEF Coordination Unit to the GEF Secretariat. Final report also submitted to the PSC and the GEF Operational Focal Point.	Annually	Paid by GEF Agency fee
Reports on co-financing	NPC with information from all co-financing partners.	Six monthly and annually as part of PPR and PIR.	USD 3,500
PSC meetings	CTA, NPC, PSC Chair, FAO Budget Holder	At least once a year	USD 12,000
Technical reports	CTA, NPC, Consultants, FAO LTO/LTU	As appropriate	From component budgets
Mid- term evaluation	External consultant(s), arranged by the FAO independent evaluation unit in consultation with the project partners, the FAO BH, LTO, LTU and the FAO GEF Coordination Unit.	At mid-point of project implementation	USD 40,000
Final evaluation	External consultant(s), arranged by the FAO independent evaluation unit in consultation with the project partners, the FAO BH, LTO, LTU and	At the end of project implementation	USD 40,000
Terminal report	PMU, FAO LTO	Within two months before end of project	USD 6,550
Total			USD 190,000

4.6 PROVISION FOR EVALUATIONS

An independent Mid-Term Evaluation (MTE) will be undertaken at project mid-term to review progress and effectiveness of implementation in terms of achieving the project objectives, outcomes and outputs. Findings and recommendations of this evaluation will be instrumental for bringing improvement in the overall project design and execution strategy for the remaining period of the project's term. FAO will arrange for the MTE in consultation with the project partners. The evaluation will, *inter alia*:

- (i) review the effectiveness, efficiency and timeliness of project implementation;
- (ii) analyze effectiveness of partnership arrangements;
- (iii) identify issues requiring decisions and remedial actions;
- (iv) propose any mid-course corrections and/or adjustments to the implementation strategy as necessary; and
- (v) highlight technical achievements and lessons learned derived from project design, implementation and management.

An independent Final Evaluation (FE) will be carried out three months prior to the terminal review meeting of the project partners. The FE will aim to identify the project impacts and sustainability of project results and the degree of achievement of long-term results. This evaluation will also have the purpose of indicating future actions needed to sustain project results and disseminate products and best-practices within the country and to neighbouring countries.

4.7 COMMUNICATION AND VISIBILITY

A communication strategy that capture issues of pesticide risk reduction throughout the pesticide lifecycle and targeting a wide audience will be developed at the inception phase and reviewed for its effectiveness at mid-term. Targeted messages and communication material will be developed for each of the project technical components in close collaboration with the members of the respective task teams. A special emphasis will be given to raising awareness on the negative effects of pesticides on vulnerable groups within the household: women, youths and children. Activities to disseminate key messages on pesticide risk reduction among the farming community will be organised as part of the Farm Field Schools.

The project will collaborate closely on the ongoing Child Labour in Agriculture initiatives in Malawi on this component and will also engage schools and come out with clear recommendations that can be included in academic curricula. Specific monitoring indicators will allow the project to monitor the performance of the communication strategy.

The project communication strategy will also support the Project Management Unit to ensure two-way exchanges with stakeholders in order to improve project implementation and ensure buy-in, particularly by the private sector in relation to the long term sustainability of the container management scheme, and by decision makers and enforcement structures in relation to sound pesticide life cycle management in Malawi and in particular to discourage the centralized procurement and inclusion of pesticides in the FISP.

5 SUSTAINABILITY OF RESULTS

5.1 SOCIAL SUSTAINABILITY

The project will generate community health, environmental and economic benefits through decreased exposure to highly hazardous pesticides, by a) removing sources of these chemicals from stockpiles and contaminated sites, b) removing contaminated containers from communities, c) promoting and encouraging availability and uptake of non-toxic alternatives, and d) enhancing the quality of products through better control of pesticides in their life cycle, ultimately reducing pesticide residues and access to better markets e) promoting community based monitoring of pesticide poisoning and increasing general awareness on pesticide risks at community level. By promoting alternatives to chemical pesticides, the project will help producers reduce their reliance on credit and expensive inputs, contributing to increased profits from production.

Due to the traditional roles and responsibilities of women, women are more vulnerable to the adverse effects of pesticide exposure than men. Children by virtue of their body weight and high activity; especially those in agricultural labour are more vulnerable to pesticide poisoning. Literacy levels among women in Malawi are significantly lower and this makes them more vulnerable to pesticide poisoning as their ability to read and understand instruction on pesticide labels is limited. Women also constitute the bulk of the agricultural labor force and are exposed to high pesticide residues in handling produce. Women may also produce food for family consumption but use pesticides intended for other crops, not in accordance with the intended uses and conditions, exposing themselves and their families to high levels of inappropriate residues. Project activities will take the gender dimensions into account, through consulting women, identifying specific needs and concerns, especially through the Farmer Field School approach. The project will ensure that: women are represented in project component activities, thus increasing opportunities for professional women in the agriculture sector; and specifically target women through partnerships with civil society organizations in training and awareness-raising activities, to ensure women are aware of the risks posed by pesticides, and empty pesticide containers, which are widely used for a variety of domestic purposes throughout Malawi especially for storage of food and water. The FFS curriculum apart from covering crop production and protection issues will also be designed to engage participants (men, women, youths) in topical socioeconomic issues including market access, HIV/AIDS, Child Labour prevention, Gender Based Violence (GBV) and other key life skills.

The issue of ensuring sustainability in FFS programmes has been largely debated. A recent global review of FFS carried out through a world-wide e-consultation and 15 country reports has concluded that the integration of the FFS principles and approaches into society and local institutions is the more effective sustainability mechanism. Particularly at a pilot phase, FFS programmes should focus on the quality of their deliverables and allow for flexibility to adapt to the local context. The FFS component of this project is a pilot aimed at providing evidences that the current use of pesticides in selected crops is improper and that there are viable alternatives that can be effectively promoted through FFS. To this effect, this project will focus on:

Providing quality training opportunities to build a strong national pool of facilitators who can serve in follow up initiatives;

Partnering with the extension service, the civil society (NGO Self Help Africa) and the private sector (for cotton) to diversify the implementation strategy and piloting various FFS modalities. The extension service of the country faces the usual challenges related to the limited human and financial resources available. The cotton sector is largely controlled by agri-business companies (e.g.

the Great Lake Cotton Company) that provide inputs along with extension services to a large number of farmers. The deployment of the FFS approach into their farmer programmes would allow for a significant farmer outreach and constitute an important sustainability mechanism;

Weaving synergies with existing nation-wide governmental programme such as the ASPPA and with other FFS regional projects to support scaling-up;

Raise-awareness at district and national levels to ensure future support through field visits;

Transfer ownership in the management of the FFS programs to the implementing partners.

5.2 ENVIRONMENTAL SUSTAINABILITY

By safeguarding and safely disposing of emergency stocks of POPs and other obsolete pesticides and associated waste, and remediating heavily contaminated sites, the project will be removing key source contaminants from the environment. The project also aims to prevent future accumulation of obsolete stocks and to reduce the use of highly hazardous pesticides by building the capacity at all critical levels (policy, institutional and community). Sound ECM also significantly reduced pollution as current disposal practices include rinsing directly in water bodies, dumping into latrines, disused wells and out in the open.

Reduction of pesticide use through IPPM conserves biodiversity and reduces pesticide contamination of the environment.

All of the project's interventions for sound pesticide management contribute directly to environmental sustainability.

5.3 FINANCIAL AND ECONOMIC SUSTAINABILITY

This project will promote sustainable intensification of farming systems, contributing to the financial and economic sustainability of farmers. The project will be implemented in collaboration with other institutions promoting Conservation Agriculture (CA) where herbicide use is often high. To reduce demand for POPs and highly hazardous pesticides, the project will research, pilot and promote viable alternatives for key crops, in an effort to drive long-term uptake of such non-toxic alternatives. Agricultural production carried out in compliance with IPPM approach contributes to high quality crops that are highly competitive within the international marketplace – particularly given that cotton is such an important export commodity for Malawi as is other organic produce. The project will endeavor to demonstrate pesticide externalities to demonstrate the hidden costs associated with heavy pesticide use, especially of POPs and other HHPs.

5.4 SUSTAINABILITY OF CAPACITIES DEVELOPED

This project aims to build sustainable capacity in national institutions. Several elements have been incorporated into the project design to ensure capacities are developed to lead to the continuity of project-initiated activities. These include: a focus on strengthening national institutional capacity and pesticide management skills; the cooperation with national stakeholders, research institutions and NGO representatives to promote alternatives to highly hazardous pesticides to prevent building up of future stocks; and the training of key national stakeholders in container management to ensure capacity exists to implement the strategy over the long term. Finally, the project focuses on empowerment of local communities through Farmer Field Schools to sustain the changes achieved. The aim is not necessarily that the FFS established will continue meeting systematically after the end of the project, but that the empowerment the communities have gained together with the increased

ecological knowledge and capacity to make sound management decisions, will be sustained by the experimental tools the FFS have provided to them, and the experienced benefits from the reduction in pesticide use.

5.5 APPROPRIATENESS OF TECHNOLOGY INTRODUCED

The project is going to utilize and promote a number of technologies, particularly under Components 1 and 4. Component 1 involves the remediation of contaminated sites. Remediation will employ locally available, cost-effective techniques, ensuring it can be repeated on further identified sites by trained national staff, post-project. Pilot activities on non-toxic alternatives will focus on affordable, low cost, readily available alternatives, aiming to demonstrate their efficacy and to ensure they are within reach of farmers.

The relevance of the technologies considered during project design is outlined in Table 1, below.

Table 1: Relevance of technologies to be used in the project

Technologies considered	Relevance
High temperature incineration of POPs obsolete pesticides and associated wastes	<ul style="list-style-type: none"> ✓ Expensive, but appropriate for high-risk obsolete pesticides that cannot be safely disposed of in Benin. ✓ Not appropriate for wastes that can be safely managed in Benin, for example soils
Triple rinsing with any organic solvent and recycling of empty containers.	<ul style="list-style-type: none"> ✓ Increases overall cleanliness rate by over 90 % ✓ Restricts the reuse of empty containers and therefore intoxication cases ✓ Provides possibilities for recycling plastic and metal materials and using them for non-food purposes.
Extension of the use of Pesticide Stock Management System (PSMS) to different departments	<ul style="list-style-type: none"> ✓ It makes it possible to ensure daily monitoring of pesticide stocks and their evolution ✓ Facilitates management of stocks within the framework of risk management plans ✓ Facilitates ready access of the various stakeholders to information about pesticides (Lists of registered pesticides, withdrawal of pesticides and other useful information)
Bioremediation and phytoremediation of soils	<ul style="list-style-type: none"> ✓ Minimizes any contribution to the contamination of the environment ✓ Utilizes local means (organic manures, native plants, etc.)

contaminated with pesticides	<ul style="list-style-type: none"> ✓ Develops local and regional expertise ✓ Significantly less expensive than “dig and dump” method (involving offshore disposal)
Alternatives to conventional chemical pesticides through Farmer Field Schools	<ul style="list-style-type: none"> ✓ Provides non-hazardous products ✓ Efficiency tested and proven for controlling a number of target pests ✓ Accessible through either local production or regulated importation ✓ Empowerment of community ✓ Focus on gender

5.6 REPLICABILITY AND SCALING UP

The project components with potential for replicability and scaling up are the container management scheme piloted in Blantyre and Lilongwe, the Farmer Field Schools to support the development and adoption of alternatives and the Communications Strategy to promote IPPM and raise awareness on pesticide risks. During the last year of implementation, based on the rate of achievements, the project will deploy a phase-out strategy with the government to ensure that successful outcomes are replicated and scaled-up as needed. The project design focuses on pilots for technologies to be scaled up. This approach will ensure activities are well developed, locally appropriate, and replicable in other geographical areas in Malawi not covered by the project, and also in neighbouring countries facing similar challenges.

Appendices

APPENDIX 1: RESULTS MATRIX

Objective				Assumptions
To reduce economic, environmental and social risks associated with the use of pesticides in agriculture and to promote sustainable intensification of agriculture				Security conditions remain stable and allow project staff to operate in all project countries
Component 1: Safe disposal of POPs and other obsolete pesticides and remediation of heavily contaminated sites				
Outcome 1	Outcome Indicators and targets	Baseline	Milestones	Assumptions
Risks to human health and the environment are reduced through safe disposal of POPs and other obsolete pesticides and remediation of contaminated sites.	<p>Up to 240 Tonnes of POPs and other obsolete pesticides disposed by high temperature incineration.</p> <p>150 tonnes of degraded pesticide disposed locally by the Government.</p> <p>Ton of soil treated/ One contaminated site remediated.</p> <p>% decline in soil contaminants</p>	<p>390 tonnes of wastes inventoried in 2012.</p> <p>230 tonnes repacked and centralized by CLI in 2012. (52 tonnes of which require to be repacked again).</p> <p>150t of the inventoried pesticides are Government procured stocks; the bulk being disputed stocks that did not meet registration requirements and others simply not distributed in time. These are degraded and low hazardous so should be disposed local by the government.</p> <p>A further 10tonnes of obsolete stocks will arise from the empty containers that were not adequately cleaned by CL during the CleanFarms project and also as a result of repackaging of the deteriorating CLI safeguarded stocks.</p> <p>Samples from the Government ISP stocks sent for analysis during PPG. The test results of the 150t Govt test to inform final quantity of Obsolete stocks to be disposed.</p>	<p><u>Year 1:</u></p> <p>Risk reduction strategies for obsolete stocks developed, approved and safeguarding completed (with complete EMPs and EIA)</p> <p>Risk reduction strategies for 1 contaminated site developed and approved.</p> <p><u>Year 2:</u></p> <p>1 contract signed for disposal.</p> <p>Implementation of long term risk reduction strategies for one contaminated site.</p> <p><u>Year 3:</u></p> <p>Disposal of obsolete stocks completed.</p> <p>Monitoring and evaluation of risk reduction measures.</p>	<p>Croplife Malawi and key institutions from GoM ministries of agriculture and environment are willing and available to cooperate in project execution and support from co-financiers is maintained.</p> <p>Safeguarding and disposal prices do not exceed USD 4500 /tonne;</p> <p>Support from key Government institutions and co-financiers is maintained.</p>

	(target to be determined).	EA done during TCP(to be updated) 4 sites with approximately 382 Tons contaminated soils have been identified in inventory. 0 Sites remediated.	Risk reduction in 1 prioritized contaminated site completed.				
Output	Indicator	Baseline	Milestones and target values				Data Collection and reporting
			Year 1	Year 2	Year 3	Means of verification	Responsibility for data collection
<u>Output 1.1</u> A safeguarding and disposal strategy is developed in line with national and international best practice (include local disposal of 150 tons of obs stocks)	Updated Environmental Assessment (EA) and Environmental Management Plan (EMP) Number of trained local waste handlers and improvement in knowledge (male/female) Disposal strategy for local disposal of 150 tonnes of degraded pesticides	2 sites repackaged (EMP completed but to be updated during PY1) 52 tonnes repacked by CLI in 2012 have degraded and cannot be shipped in their present condition either because drums are leaking or plastic packaging is past shelf life.	Updated Environmental Assessment (EA) and Environmental Management Plan (EMP) approved	Strategy for local disposal available		EA EMPs	CropLife Malawi (CLM) Project coordinator (PC)

<p><u>Output 1.2</u> 240 tonnes of Obsolete stocks and associated wastes are disposed of in an environmentally sound manner</p> <p>(include up to 240 tons of obs stocks for disposal abroad)</p>	<p>Tonnes / sites safeguarded and disposed in line with international standards (EMTK)</p> <p>Quality of tender specification and compliance with SC/ best practice</p> <p>Number of non-conformities reported in line with contract and EMTK</p>	<p>390t safeguarded in Blantyre and Lilongwe</p> <p>150 tons to be disposed of locally</p> <p>52 tonnes need repackaging</p>		<p>Disposal company selected & contract signed</p>	<p>390t disposed of in line with international standards.</p>	<p>Technical specifications</p> <p>List of pre-selected firms.</p> <p>Signed contract</p> <p>Contractors clean up report</p> <p>Basel Transport Certificates</p> <p>Destruction certificates</p>	<p>Crop Life Malawi (CLM)</p> <p>Contractor</p> <p>NPC/FAO</p> <p>Task Team</p>
<p><u>Output 1.3</u></p> <p>Risks posed by 1 contaminated site are significantly reduced</p>	<p>% Reduction in contamination level/risk of exposure at mitigated sites against baseline</p> <p>Number of people trained and improvement in knowledge (Male/Female)</p>	<p>6 potentially contaminated sites identified in TCP</p> <p>4 priority sites identified for further investigations</p> <p><i>Levels of contamination TBD based on detailed site specific remediation plans</i></p>	<p>4 CSMS developed</p> <p>Local team trained in risk assessment of contaminated sites</p>		<p>Remediation of the prioritized sites completed</p>	<p>Analytical and evaluation reports</p> <p>Remediation strategy document</p> <p>Laboratory analysis report Participant list, itinerary</p> <p>Post training questionair</p>	<p>CLM</p> <p>NPC</p> <p>Task Team</p> <p>Laboratory</p>

Component 2: Management of empty containers						
Outcome 2	Outcome Indicators and targets		Baseline	Milestones		Assumptions
Health and environmental risks associated with empty pesticide containers and their reuse are reduced	Number of empty containers triple rinsed, collected and stored awaiting recycling; 90% of all containers triple rinsed and collected/stored/ recycled.		Of 55,000 containers generated annually, 5% are triple rinsed, none is collected and recycled 75% of Known farms store containers onsite No data on unknown farms	Year 1 & 2: 10,000 are triple rinsed, collected and stored awaiting recycling and /or disposal Year 3 : 45,000 containers are triple rinsed, collected and stored awaiting recycling and /or disposal. Legacy containers that cannot be triple rinsed are disposed under Outcome 1 if possible		Stockpiles of containers remain secure and have not been pilfered and sold. Farmers are willing and able to carry out triple rinsing. The triple rinsing process results in non-hazardous levels of residues in line with legislation. Government institutions and private sector willing to cooperate
	National policy / action plan based on pilot adopted by Government of Malawi EAD/PCB		POPTT Indicator 1.4.2.4 Status = 0	POPTT status = 2		
Output	Indicator	Baseline	Milestones and target values			Data Collection and reporting
			Year 1	Year 2	Year 3	Means of verification

<p>Output 2.1 Container management pilot implemented in Southern Regions of Malawi</p>	<p>Value, type of recycling equipment installed (<i>tbd based on strategy</i>)</p> <p>Number of farmers trained in triple rinsing (M/F) and motivations (target to be determined)</p> <p>Number of empty metallic and plastic containers reused/ triple rinsed & collected in Blantyre</p>	<p>Metal drum crushing/ recycling equipment</p> <p>20 Protocol estates (15 sites)</p> <p>Smallholder out grower schemes and CropLife member employees trained</p> <p>An estimated 55,000 plastic, 5,000 metal – Partly triple rinsed not collected</p> <p>No data on levels of reuse</p>	<p>Equipment procured</p> <p>Baseline data from survey on pesticide management practices</p>	<p>Agents trained in container management</p> <p>Pilot operational</p> <p>40% collected</p>	<p>60% collected</p> <p>Assessment and Hand over of scheme</p>	<p>Invoices/ procurement</p> <p>Equipment Report</p> <p>Training modules/reports</p>	<p>Project PMU</p> <p>The collecting company</p>
<p>Output 2.2 Assessment and scaling up of the Blantyre pilot scheme to a permanent operator completed</p>	<p>Number of stakeholders contributing to a sustainable CM facility in Blantyre</p>	<p>Waste management companies exist but do not handle pesticide containers</p>	<p>Feedback received on options proposed for strategy</p>	<p>Industry roles and support during pilot operation</p> <p># participants attending annual review</p>		<p>PMU/ Industry/EAD/PCB</p>	

Component 3: Strengthening legal and institutional frameworks for pesticide risk management and life cycle management				
Outcome 3	Outcome indicators & targets	Baseline	Milestones	Assumptions
Legal and institutional frameworks strengthened for sound life cycle management	<p>Revised national legislation and regulations in compliance with international obligations developed</p> <p>Endorsement of the National Strategy &/or Action Plan (NSAP) specifically pertaining to implementation of the Code</p> <p>An information exchange platform hosted by PCB to strengthen intergovernmental coordination and cooperation on hazardous chemical management validated and operational.</p>	<p>Current Legislation in Malawi (Pesticides Act 2000) is not aligned with Malawi's international commitments for pesticide risk reduction and does not enable effective pesticide life cycle management.</p> <p>No IPM Policy in place</p> <p>Draft Bill prepared under TCP/MLW/3302 undergoing approval process but still missing some key enabling regulations for effective post registration enforcement.</p> <p>The PCB is the legislated body for pesticide registration and post registration enforcement but its operations are severely hampered by financial, technical and human resource constraints.</p> <p>No formal mechanisms for exchange of information e.g. for implementation of Rotterdam Convention; new registrations etc</p>	<p>Year 1: Drafting the texts of the technical regulations, and IPM Policy</p> <p>Drafting the texts of National Strategy &/or Action Plan (NSAP) for the implementation of the Code ensure sound life cycle regulation of pesticides</p> <p>Year 2: Legal validation of regulations and NSAP</p> <p>Year 3: Manuals of procedures and legal capacity development activities drafted</p> <p>Draft IPM Policy submitted to Government for approval</p> <p>Monitoring and evaluation of effectiveness of PCB.</p> <p>National system for inspection and quality control of pesticides operational</p>	<p>Timely adoption of the updated Legislation by the Parliament.</p> <p>Beneficiaries are willing to participate in training seminars and apply the acquired knowledge in effective implementation of the revised legal framework for the management of pesticides</p> <p>Effective enforcement of reforms.</p> <p>Stability in staff appointments</p>

Component 3: Strengthening legal and institutional frameworks for pesticide risk management and life cycle management							
Output	Indicator	Baseline	Milestones and target values				Data Collection and reporting
			Year 1	Year 2	Year 3	Means of verification	Responsibility for data collection
<p>Output 3.1</p> <p>National regulations developed and updated in conformity to international guidelines and submitted to Government for approval</p>	<p>Comprehensive national legal framework enabling the domestication of international and regional instruments</p> <p>National IPM Policy document endorsed by stakeholders</p>	<p>The Pesticides Act 2000; Pesticides Regulations 2002; Plant Protection Act in place and Draft Bill submitted for approval in 2013.</p> <p>There are gaps in regulations for sound life cycle management (for transportation, illegal trade, disposal of used or empty containers, control of pollution and disposal of pesticide waste)</p> <p>Assessment report of legislative and regulatory framework (TCP/MLW/3302).</p>	<p>Pesticide Regulations for drafted for transportation, illegal trade, disposal of used or empty containers, control of pollution and disposal of pesticide waste</p>	<p>Draft IPM Policy submitted to Government for approval</p>	<p>Draft Regulations submitted to Government for approval</p>	<p>Project Progress Reports (PPR)</p> <p>Finalized national legislation and policy document</p> <p>Record of submissions to national authorities</p>	<p>FAO – AGPM and LEGN</p> <p>National legal expert</p> <p>Concerned Governmental bodies responsible for approval</p>
<p>Output 3.2</p> <p>Measures to strengthen the capacity of the Pesticide Control Board to enforce post-registration regulations developed</p>	<p>Development of a National Strategy &/or Action Plan for implementation of the Code of Conduct.</p> <p>% regulators trained on pesticide risk assessment and post registration</p>	<p>No clear national strategic plan for effective lifecycle regulation of pesticides</p>	<p>Draft National strategy, workplan and budget for inspection and quality control of pesticides developed</p>	<p>Revised strategy document for pesticide developed</p>		<p>PPR</p> <p>Evaluation and assessment</p>	<p>FAO</p> <p>PCB</p>

<p>Output 3.3</p> <p>National capacity for pesticide inspections and post-registration enforcement strengthened</p>	<p>Number of mandated and trained pesticide inspectors, customs, plant protection and other officers involved with enforcement</p> <p>National network of pesticide information exchange</p>	<p>Poor post registration enforcement and substandard products on the market</p> <p>PCB currently conducts fortnightly inspections. Each inspection results in several confiscations from illegal traders mainly with illegal products. The number and frequency of inspections falls short of optimal requirements due to manpower and resource limitations.</p> <p>Multiple initiatives in broader chemicals and pesticides management but no systematic information sharing</p> <p>Database of all registered pesticides now available in Excel ready for uploading into PSMS.</p> <p>11 PCs purchased during the TCP for PSMS deployment, 2 PCB staff trained in PSMS.</p>	<p>Training plan and material, developed and under implementation</p> <p>Training of PCB staff</p> <p>PSMS training for 6 officers</p> <p>Deployment of PSMS for registered products</p> <p>Platform membership for information exchange identified.</p>	<p>20 plant protection, inspectors, customs and other concerned staff trained (M/F)</p> <p>National network of pesticide information exchange operational.</p>	<p>Re-evaluation of PCB capacity</p>	<p>Training modules</p> <p>Training reports</p> <p>Performance tests</p> <p>Inspection reports</p> <p>Records of meetings</p> <p>Records of communications for information exchange</p> <p>Training</p> <p>PSMS logs</p>	<p>PCB; PC</p>
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Component 4: Promotion of alternatives to POPs and other hazardous chemical pesticides				
Outcome 4	Outcome indicators and targets	Baseline	Milestones	Assumptions
IPM alternatives to conventional pesticides successfully promoted and the use of chemical pesticides and highly hazardous pesticides reduced through Farmer Field Schools.	<p>IPM FFS implementation strategy validated in PY1.</p> <p>A national cadre of national facilitators and 40 Farmer Field Schools building farmers' capacity on agro-ecological management of farming systems. 800 farmers trained through FFS.</p> <p>% Reduction in pesticide use on vegetables, cotton, and maize among trained farmers</p>	<p>A general implementation plan for FFSs has been developed during the PPG in close consultation with the government</p> <p>Farmers' practices and national capacity for promotion of IPM and other alternatives to chemicals to be determined in Yr1</p> <p>34 gov officers (26 M/8F) trained on FFS approach and principles under TCP/MLW/3302</p> <p>.Pesticide use baseline to be determined.</p>	<p>Year 1:</p> <p>IPM FFS implementation strategy validated.</p> <p>Training of trainers conducted.</p> <p>Year 2:</p> <p>1 Training of Trainers on cotton</p> <p>Short training on maize post-harvest</p> <p>10 FFSs established</p> <p>Year 3:</p> <p>1 Training of Trainers on cotton and vegetables</p> <p>30 FFS established</p>	<p>Government institutions, NGOs, and private sector willing to cooperate for integrated pest and pesticides management to reduce crop losses due to pest and diseases and negative impact to human health and environment caused by pesticides</p> <p>Extension services are enabled (time and transport) to train and assist farmers in the use of alternative management practices.</p> <p>Adherence of stakeholders to demonstrations of selected alternatives;</p> <p>Participation of relevant institutions and structures in tests for the confirmation of results of alternatives;</p>

Output	Indicator	Baseline	Milestones and target values			Data Collection and reporting		
			Year 1	Year 2	Year 3	Means of verification	Responsibility for data collection	
<p>Output 4.1</p> <p>IPM FFS implementation strategy validated with key stakeholders</p>	Validated IPM FFS strategy	A general implementation plan for FFSs has been developed during the PPG in close consultation with the government. The operationalization of this plan will require further planning with the Department of Agriculture and the collaborating partners to define location and duration of the activities, roles and implementation responsibilities.	Consultations and validation completed				NPC FAO	
<p>Output 4.2</p> <p>Capacity building on IPM FFS on cotton, and vegetables, and maize in 3 ADDs (Salima, Shire Valley and Machinga)</p>	<p>Number of trainers trained in IPM FFS (M/F)</p> <p>Number of farmers trained in IPM FFS (M/F). Target 800.</p>	<p>Extension personnel and farmers trained during TCP/MLW/3302</p> <p>Past and ongoing project on sustainable agriculture – Self Help Africa</p> <p>Ongoing IPM work – post harvest (DARS) and vegetables – DCD with IFAD/icipe</p> <p>Ongoing projects using FFS approach to promote GAP in selected ADDs with GLCC, SHA, World Vision; Total LandCare</p>	TOT FFS curriculum revision	<p>1st TOT for cotton for 30 Extension Officers FFS in cotton</p> <p>10 FFS on cotton</p> <p>Short post-harvest training on maize</p>	TOT for vegetables and maize	<p>30 FFS for cotton, and vegetable</p>	<p>Training Modules</p> <p>Training Reports</p> <p>PPR</p> <p>FFS reports</p>	<p>NPC</p> <p>Department of Crop Development</p> <p>FAO</p> <p>DAES</p> <p>Farmer/producer associations</p>

<p>Output 4.3</p> <p>Communication and dissemination strategy to raise awareness on pesticide risks along the pesticide life cycle and to promote IPM</p>	<p>Number of awareness raising activities (materials and or events)</p> <p>Number of extension providers, farmers and other pesticide users receiving information (materials and/or events)</p>	<p>DAES with field staff and a robust communication departments available</p> <p>No clear communication strategy to raise awareness on pesticide risks and promote IPPM in place</p> <p>Ongoing Child Labour project – component on pesticide risks.</p>	<p>Communication strategy developed.</p> <p>Identify and strengthen linkages with partners that have community based agricultural activities.</p>	<p>2 Field days involving 150 people between farmers, extensionists and policy makers from Ministry of Agriculture</p>	<p>At least 300 farmers and other stakeholder groups receiving information.</p>	<p>Photographs and videos</p> <p>Media coverage</p> <p>Reports</p>	<p>NPC</p> <p>Extension department and agents</p>
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Output	Activities	Responsible entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	2.1.2. Develop a pilot strategy for the sustainable management of pesticide containers in consultation with key stakeholders, including a business plan for Government's approval and establishment	NPC, FAO, Crop Life		x	x	x								
	2.1.3. Engage through a competitive bid a contractor to supply collection and materials handling equipment, undertake the collection, transportation and recycling/disposal of containers	NPC, FAO Operator			x	x	x	x	x	x	x			
	2.1.4. Develop and implement an awareness campaign for pesticide users for tripling rinsing and their responsibilities for returning containers	NGO, farmer associations, CropLife; DCD, DAES				x	x	x	x	x	x	x	x	x
Output 2.2. Assessment and scaling up of the Blantyre pilot scheme to a permanent operator completed	2.2.1. Assess the Blantyre pilot scheme for scaling up	NPC, CropLife, M&E officer, PSC					x	x	x	x				x
	2.2.2. Develop and validate with pesticide importers and distributors their strategy for the management of the scheme based on the pilot and present to Government for approval.	NPC, PSC, Operator								x	x	x		

Output	Activities	Responsible entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	2.2.3. Following formation by the pesticide importers and distributors of the institutional body for the management of the CMS, formally hand over assets of the pilot to the Government for them to manage their loan to the institutional body.												x	x
Component 3.	Strengthening legal and institutional frameworks for pesticide risk management and life cycle management													
Output 3.1. National Regulations developed and updated in conformity to international guidelines and submitted to Government for approval	3.1.1. Draft, review with stakeholders and validate Regulations to enforce the revised pesticide legislation.	PCB, Consultants	x	x	x	x	x	x	x	x				
	3.1.2. Develop an IPM policy through consultative process involving key national institutional stakeholders and regional expertise	PCB, PSC, DARS, DAES, FAO, Consultants					x	x	x	x				
Output 3.2. Measures to strengthen the capacity of the Pesticide Control Board to enforce post registration Regulations developed	3.2.1. Assess PCB's existing strategy and capacity to undertake post registration enforcement and development of strategy recommendations for its strengthening	PCB, NPC, Consultants, PSC	x	x	x	x	x							

Output	Activities	Responsible entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	3.2.2. Train pesticide regulators on HHPs identification, pesticide registration risk assessment and regulatory risk reduction measures	Consultants, PCB					x	x	x	x				
Output 3.3. National capacity for registration and post registration enforcement strengthened	3.3.1. Develop training materials for the inspection and control of pesticides	FAO, PCB, Consultants	x	x	x	x								
	3.3.2. Train 20 staff on post registration regulation of pesticides and PSMS	PC, PCB, Consultants					x	x	x	x	x	x	x	x
	3.3.3. Develop, validate and roll out information exchange system.	PC,FAO, Consultants				x	x	x	x	x	x	x	x	x
Component 4.	Promotion of alternatives to POPs and other hazardous chemical pesticides													
Output 4.1. IPM FFS implementation strategy validated with key stakeholders	4.1.1. Organize start off meetings and field visits with key stakeholders (DAES, DCD, DARS, SHA cotton companies, related FAO projects and Farmers' Unions) to validate workplan	PSC, Consultants, NPC	x	x										
Output 4.2. Capacity building on IPM FFS on cotton, maize and vegetables in 3 ADDs (Salima, Shire Valley and Machinga)	4.2.1. Carry out an assessment of the major problems on targeted crops leading to heavy use of pesticides, including HHPs, current farm practices and needs for alternative options	DCD,DAES, Consultants, NPC,			x	x						x		

APPENDIX 3: RESULTS BUDGET

Oracle Code	Description (ORACLE)	Units	#units	Unit Cost	Component 1: Disposal			Total GEF		Year 1	Year 2	Year 3	Total
					1.1	1.2	1.3						
5570	CONSULTANTS												
5542	INTERNATIONAL CONSULT.												
	Obsolete Pesticides-	Month	1	12,000	12,000		12,000		12,000			12,000	
	Safeguarding and disposal	Month	1	12,000	0	12,000	12,000			12,000		18,000	
	Contaminated site assessment	Month	2	12,000	0	0	24,000	24,000	12,000	6,000	6,000	24,000	
	CTA	Month	3	12,000	12,000	12,000	12,000	36,000	18,000	12,000	6,000	36,000	
5542	Sub-total (international)				24,000	24,000	36,000	84,000	42,000	30,000	12,000	84,000	
5543	NATIONAL CONSULTANTS												
	National Project Coordinator	Month	9	1,000	3,000	3,000	3,000	9,000	3,000	3,000	3,000	9,000	
	Contaminated Sites	Month	2	3,000	0	0	6,000	6,000	4,000	6,800	6,000	16,800	
5543	Sub-total (national)				3,000	3,000	9,000	15,000	3,000	3,000	9,000	15,000	
5570	TOTAL CONSULTANTS				27,000	27,000	45,000	99,000	45,000	33,000	21,000	99,000	
5900	TRAVEL												
	International				7,000	8,000	9,000	24,000	10,000	8,000	6,000	24,000	
	CTA				5,000	5,000	5,000	15,000	6,000	5,000	4,000	15,000	
	National + national teams				2,000	2,000	6,000	10,000	4,000	3,000	3,000	10,000	
5900	TOTAL TRAVEL				14,000	15,000	20,000	49,000	20,000	16,000	13,000	49,000	
5920	TRAINING												
	TOTAL Training				6,000	0	6,700	12,700	6,000	6,700	0	12,700	
5650	CONTRACTS												
	Disposal	tons	240	4500		1,080,000	0	1,080,000	0	540,000	540,000	1,080,000	
	Soil analysis					0	20,000	20,000	10,000	5,000	5,000	20,000	
	Contaminated sites remediation					30,000		30,000	10,000	10,000	10,000	30,000	
5650	Total Contracts					1,110,000	20,000	1,130,000	20,000	555,000	555,000	1,130,000	
6000	EXPENDABLE PROCUREMENT												
	Personal Protective Equipment						10,000	10,000	5,000	5,000		10,000	
	IT (consumables)						0	0				0	
6000	Total Exp procurement						10,000	10,000	5,000	5,000		10,000	
6100	NON-EXPENDABLE PROCUREMENT												
	Soil sampling equipment						30,000	30,000	30,000			30,000	
6100	TOTAL Non exporcurement						30,000	30,000	30,000			30,000	
6300	GENERAL OPERATING EXPENSES												
	Car hire + other GOE				1,000	5,000	5,000	11,000	5,000	4,000	2,000	11,000	
6300	TOTAL GOE				1,000	5,000	5,000	11,000	5,000	4,000	2,000	11,000	
TOTAL	Component 1				48,000	1,157,000	136,700	1,341,700	131,000	619,700	591,000	1,341,700	

Oracle Code	Description (ORACLE)	Units	No. of units	Unit Cost	Component 2: Container Management		Total GEF		Year 1	Year 2	Year 3	Total
					2.1	2.2						
5570	CONSULTANTS											
5542	INTERNATIONAL CONSULTANTS											
	Legal consultant	Month	1.5	12,000		12,000	6,000	18,000	9,000	9,000	0	18,000
	Communications expert	Month	1	12,000		9,000	3,000	12,000	4,000	4,000	4,000	12,000
	Container Management	Month	3	12,000		24,000	12,000	36,000	12,000	12,000	12,000	36,000
	CTA	Month	4	12,000		30,000	18,000	48,000	20,000	10,000	18,000	48,000
5542	Sub-total (international)					75,000	33,000	114,000	45,000	35,000	34,000	114,000
5543	NATIONAL CONSULTANTS											
	National Project Coordinator	Month	8	1,000		4,000	4,000	8,000	3,000	2,000	3,000	8,000
	Legal consultant	Month	2	4,000		4,000	4,000	8,000	4,000	4,000		8,000
	Container Management	Month	9	3,000		21,000	6,000	27,000	9,000	9,000	9,000	27,000
5543	Sub-total (national)					29,000	14,000	43,000	16,000	15,000	12,000	43,000
5570	TOTAL CONSULTANTS					104,000	47,000	157,000	61,000	50,000	46,000	157,000
5900	TRAVEL											
	International					8,000	8,000	16,000	8,000	4,000	4,000	16,000
	National + national teams					10,000	2,000	12,000	4,000	4,000	4,000	12,000
5900	TOTAL TRAVEL					18,000	10,000	28,000	12,000	8,000	8,000	28,000
5920	TRAINING											
5650	CONTRACTS											
	Communications campaign					10,000		10,000		3,000	7,000	10,000
	Container Management					50,000		50,000		50,000		50,000
5650	TOTAL CONTRACTS					60,000		60,000	0	53,000	7,000	60,000
6000	EXPENDABLE PROCUREMENT											
	Personal Protective E					3,000		3,000	3,000	0	0	3,000
	IT (computers, printers)					2,000		2,000	1,000	500	500	2,000
6000	Expendable procurement					5,000		5,000	4,000	500	500	5,000
6100	NON-EXPENDABLE PROCUREMENT											
	Container processing equipment					15,000		15,000	15,000	0	0	15,000
6100	TOTAL Non expendable procurement					15,000		15,000	15,000	0	0	15,000
6300	GENERAL OPERATING EXPENSES											
	National Strategy workshop/consultations						15,000	15,000	7,500	0	7,500	15,000
	Car hire + other GOE					4,000	0	4,000	1,000	1,000	2,000	4,000
6300	TOTAL GOE					4,000	15,000	19,000	8,500	1,000	9,500	19,000
	Total				Component 2	206,000	78,000	284,000	100,500	112,500	71,000	284,000

Oracle Code	Description (ORACLE)	Units	# units	Unit Cost	Component 3: Capacity Building			Total GEF	Year 1	Year 2	Year 3	Total
					3.1	3.2	3.3					
5570	CONSULTANTS											
5542	INTERNATIONAL CONSULTANTS											
	Legal	Month	1	12,000	12,000	0	0	12,000	6,000	6,000		12,000
	Pesticide Management	Month	1.5	12,000	6,000	6,000	6,000	18,000	9,000	9,000		18,000
	PSMS	Month	0.5	12000	0	0	6,000	6,000	6,000		0	6,000
	CTA	Month	2	12000	8,000	8,000	8,000	24,000	12,000	12,000	0	24,000
5542	Sub-total (international)				26,000	14,000	20,000	60,000	33,000	27,000	0	60,000
5543	NATIONAL CONSULTANTS											
	National Project Coordinator	Month	7	1,500	4000	4,000	2,500	10,500	4000	4,000	2,500	10,500
	Legal Consultant	Month	3	4,000	12000	0	0	12,000	8,000	2,000	2,000	12,000
	Pesticide Management	Month	2	3,000		3,000	3,000	6,000	2,000	4,000		6,000
5543	Sub-total (national)				16000	7,000	5,500	28,500	14,000	10,000	4,500	28,500
5570	TOTAL CONSULTANTS				42,000	21,000	25,500	88,500	47,000	37,000	4,500	88,500
5900	TRAVEL											
	International				7000	7,000	7,000	21,000	7,000	7,000	7,000	21,000
	National + national teams and workshop participants				7500	5,000	7,500	20,000	8,000	6,000	6,000	20,000
5900	TOTAL TRAVEL				14500	12000	14500	41,000	15,000	13,000	13,000	41,000
5920	TRAINING											
5650	CONTRACTS											
6000	EXPENDABLE PROCUREMENT											
	Personal Protective Equipment						4,000	4,000	4,000			4,000
6100	NON-EXPENDABLE PROCUREMENT											
	IT (computers, printers)						5,000	5,000	5,000			5,000
	Pesticide sampling equipment						5,000	5,000	5,000			5,000
6100	TOTAL Non expendable procurement						10,000	10,000	10,000			10,000
6300	GENERAL OPERATING EXPENSES											
	National Strategy workshop/ IPM policy consultations				6,000	6,000	6,000	18,000	6,000	6,000	6,000	18000
	Car hire + other GOE						6,000	6,000	2,000	2,000	2,000	6,000
6300	TOTAL GOE				6,000	6,000	12,000	24,000	8,000	8,000	8,000	24,000
TOTAL	COMPONENT 3				62,500	39,000	66,000	167,500	84,000	58,000	25,500	167,500

Oracle Code	Description (ORACLE)	Units	No. of units	Unit Cost	Component 4: Alternatives			Total GEF		Year 1	Year 2	Year 3	Total
					4.1	4.2	4.3						
5570	CONSULTANTS												
5542	INTERNATIONAL CONSULTANTS												
	IPM specialist	Month	4	12,000	0	42,000	6,000	48,000		12,000	24,000	12,000	48,000
	FFS Specialist	Month	5	12,000	0	90,000	6,000	60,000		24,000	24,000	12,000	60,000
	CTA	Month	5	12,000	6,000	48,000	6,000	60,000		20,000	20,000	20,000	60,000
5542	Sub-total (international)					180,000	18,000	168,000		56,000	68,000	44,000	168,000
5543	NATIONAL CONSULTANTS												
	National Project Coordinator	Month	6	1,000	0	3,000	3,000	6,000		2,000	2,000	2,000	6,000
	Communications	Month	1	3,000	0	0	3,000	3,000		1,000	1,000	1,000	3,000
	IPM national	Month	6	3,000	0	25,000	5,000	18,000		6,000	6,000	6,000	18,000
5543	Sub-total (national)				0	28,000	11,000	27,000		9,000	9,000	9,000	27,000
5570	TOTAL CONSULTANTS				0	208,000	29,000	195,000		65,000	77,000	53,000	195,000
5900	TRAVEL												
	International				5000	10,000	5,000	20,000		10,000	5,000	5,000	20,000
	National consultants				3000	10,000	3,000	16,000		3,000	10,000	3,000	16,000
	Regional Workshops		2	10000	0	20,000	0	20,000		10,000	5,000	5,000	20,000
	ToT workshop				0	20,000	0	20,000		10,000	10,000	0	20,000
	Enumerators				0	20,000	0	20,000		0	10,000	10,000	20,000
5900	TOTAL TRAVEL				8000	80000	8000	96,000		33,000	40,000	23,000	96,000
5650	CONTRACTS												
	FFS implementation					70000		70000			35,000	35000	70,000
	Field Guideline design and printing						20000	20000			0	20,000	20,000
5650	TOTAL Contracts					70000	20000	90000			35,000	55,000	90,000
6000	EXPENDABLE PROCUREMENT												
	ToT material					10,000		10,000			5000	5000	10,000
	FFS kits	kit	40	500		20,000		20,000			10000	10000	20,000
6000	Expendable procurement Budget					30,000		30,000			15,000	15,000	30,000
6100	NON-EXPENDABLE PROCUREMENT												
	IT (computers, printers)						5000	5,000		5000			5,000
6100	TOTAL Non expendable procurement						5000	5,000		5,000			5,000
6300	GENERAL OPERATING EXPENSES												
	General Operating Expenses				2000	4,000	500	6,500		2,000	3,000	500	5,500
6300	TOTAL General Operating Expenses				2000	4,000	500	6,500		2,000	3,000	1,500	6,500
TOTAL	Component 4					10,000	312,000	57,500	422,500	105,000	155,000	132,500	422,500

Oracle Code	Description (ORACLE)	Units	No. of units	Unit Cost	Component 5: M&E				Project Management	Total GEF		Year 1	Year 2	Year 3	Total
					5.1	5.2	5.3	TOTAL							
5300	SALARIES PROFESSIONAL														
	Budget and Operations Officer	Months	35	4122.9				0	144300		45351	49474	49475	144,300	
5300	TOTAL SALARIES PROFESSIONAL				0	0	0	0	144,300		45,351	49,474	49,475	144,300	
5570	CONSULTANTS														
5542	INTERNATIONAL CONSULTANTS														
	Expert for MTE and TE (lump sum)				0	50,000	0	50,000	0	50,000	0	25,000	25,000	50,000	
	Communication	Days	10	400	0	0	4,000	4,000	0	4,000	1,200	1,200	1,600	4,000	
	Chief Technical Advisor	Months	2	12,000	24000	0	0	24,000		24,000	8,000	8,000	8,000	24,000	
5542	Sub-total (international)				24000	50,000	4,000	78,000	0	78,000	9,200	34,200	34,600	78,000	
5543	NATIONAL CONSULTANTS														
	NPC	Month	5	1,500	7,500	0	0	7,500	0	7,500	2,500	2,500	2,500	7,500	
	M&E consultant	Month	10	1,400	14,000	0	0	14,000	0	14,000	4,000	5,000	5,000	14,000	
	Communication Expert	Month	10	1,400		0	14,000	14,000	0	14,000	4,000	5,000	5,000	14,000	
5543	Sub-total (national)				21,500	0	14,000	35,500	0	35,500	10,500	12,500	12,500	35,500	
5570	TOTAL CONSULTANTS				45,500	50,000	18,000	113,500	0	113,500	19,700	46,700	47,100	113,500	
5900	TRAVEL														
	Evaluation				0	30,000	0	30,000	0	30,000	0	15,000	15,000	30,000	
	NPC				1450	0	0	1,450	0	1,450	500	500	450	1,450	
	CTA				6,000	0	0	6,000	0	6,000	2,000	2,000	2,000	6,000	
	M&E expert				5,000	0	0	5,000	0	5,000			5,000	5,000	
	Communication				5,000	0	0	5,000	0	5,000	1,000	2,000	2,000	5,000	
5900	TOTAL TRAVEL				17450	30000	0	47,450	0	47,450	3,500	19,500	24,450	47,450	
5920	TRAINING														
6300	GENERAL OPERATING EXPENSES														
	Inception and closing workshop, PSC meetings				0		22,500	22,500	0	22,500	7,500	7,500	7,500	22,500	
	Terminal Report				0	6550	0	6,550	0	6,550	0	0	6,550	6,550	
6300	TOTAL General Operating Expenses				0	6,550	22,500	29,050	0	29,050	7,500	7,500	14,050	29,050	
TOTAL					62,950	86,550	18,000	190,000	144,300	334,300	76,051	123,174	135,075	334,300	

APPENDIX 4: DRAFT TERMS OF REFERENCE

National Project Coordinator

Under the overall supervision of the Project Steering Committee, the FAO Budget Holder, and with direct technical support and guidance from the FAO Lead Technical Officer (LTO) and the Chief Technical Advisor, the National Project Coordinator (NPC) will have the following roles and responsibilities:

Project management

- Coordinating all project activities at national level;
- Facilitation of coordination between the PMU, Task teams and other stakeholders;
- Under the guidance and direction of the LTO and CTA, implement monitoring and evaluation activities at national level;
- In accordance with approved annual work plans and budgets, organize and facilitate national workshops, training exercises and official meetings;
- Supervise national consultants and contracts;
- Preparation of project progress reports;
- Liaise with relevant national organizations and partners and support communication, coordination and collaboration;
- Drafting of annual work plans and budget revisions for approval by PSC, BH and LTO;
- Timely completion of all local requests according to FAO rules and in consultation with local FAO office for local disbursement of funds to facilitate implementation of project activities;
- Compile information on co-financing from national partners; and
- Perform other related duties as required.

Technical Activities

- Assist in the development of the project EA and EMP by facilitating access to relevant data and by acting as liaison with other national departments;
- Assist in the training and supervision of safeguarding activities;
- Assist in the baseline survey for pest and pesticide management including identification of HHPs;
- Support national consultants in the completion of assignments by mobilizing information, facilitating meetings and organizing workshops;
- Support the completion of technology trials and pilot studies for all components as required, acting as focal point for liaison with line ministries and other stakeholders;
- Assist in the implementation of the full-scale remediation of priority contaminated site;
- Assist in the development of component level M&E tracking tools and quality assurance systems.

Requirements:

1. University degree in Agronomy and / or plant protection or integrated pest and pesticide management or in a related subject matter;
2. Five years of relevant professional experience;
3. Excellent oral and written communication skills in English;
4. Familiarity with pest and pesticide management issues in the country;
5. At least two years project management/coordination experience;
6. A working understanding of the International Conventions for sound pesticide management such as the Basel, Rotterdam and Stockholm.

Chief Technical Advisor

In close collaboration with the LTO, and under the direct supervision of FAO Malawi Representative, the Chief Technical Advisor will assist the National Project Coordinator in the coordination and implementation of the project.

In particular, the CTA will:

- Train the NPC on effective and efficient coordination and implementation of the project activities;
- Review implementation progress for the component against the planned schedule to ensure that the overall project time frame is met and propose acceptable alternatives to the NPC when delays arise;
- Review of standards of implementation for project implementation to ensure compliance with international best practice;
- Contribute to the preparation of TORs for consultant input and review reports;
- Skills transfer to NPC and national staff through on-the-job training for each project component including participation in training of national staff in specific areas related to:
 - Inventory
 - PSMS,
 - environmental assessment,
 - pesticide life cycle analysis,
 - integrated pest management,
 - farmer field schools;
 - communications and awareness creation,
 - work plan development
 - M&E plan development,
 - Quality assurance and compliance monitoring.

Requirements:

1. An advanced university degree in Agronomy and / or plant protection or integrated pest and pesticide management or in a related subject matter;
2. At least ten years of relevant professional experience in pesticide management and the prevention of pesticide accumulation;
3. Experience and advanced knowledge in pesticide reduction and replacement and sustainable pest management techniques;
4. Experience in negotiating at senior level with Governments; international organizations and other relevant organizations;
5. Knowledge of relevant activities among Intergovernmental Organizations (IGOs), NGOs, the donor community and private sector;
6. Excellent oral and written communication skills in English;
7. Familiarity with pest and pesticide management issues;
8. Familiarity with data processing and common computer software;
9. At least two years project management/coordination experience;
10. A working understanding of the International Conventions for sound pesticide management such as the Basel, Rotterdam and Stockholm.

International Consultant: Pesticide Waste Management (Contaminated site assessment, EMP and tender development for disposal of obsolete stocks)

Under the direct supervision of the NPC, CTA and FAO Lead Technical Officer, the consultant will be responsible for the following activities in accordance with the procedures set out in EMTK volume 5:

- Train national teams of technicians from the Ministries of Agriculture, Environment and Health and MBS in the application of rapid environmental assessment (REA) tools;
- Based on a rapid assessment of the contaminated sites by the teams prepare a report on the prioritization to identify the sites representing the greatest risk to public health and environment. Present findings and prioritization to the PSC for adoption
- Lead the development of detailed site specific sampling plans including provisional conceptual site models;
- Train the national team and lead them in the intrusive investigations of the prioritized site including implementation of the sampling plans.
 - Following the completion of the sampling and analysis programme, develop final conceptual site models and site specific Environmental Management Plans (EMPs);
 - Develop site specific risk reduction / remediation strategies based on risk management approach;
 - Complete site specific technology assessment for the treatment of the contaminated materials based on technical and economic feasibility assessment.

Present and discuss with the national counterparts the site specific proposals;

- Review the environmental management plans (EMP) developed by the Contractor for the safeguarding operation, including health and safety procedures, and all safeguarding procedures (packaging materials, labelling, etc)
- Train national team to monitor the safeguarding operations of CLI for conformance to EMP, EMTK standards and in conformance of International Maritime Dangerous Goods Code
- Train national team to monitor the compilation of the inventory and weights of the safeguarded stocks
- Develop detailed tender specifications for the export and destruction of the safeguarded obsolete pesticides
- Supervise, monitor and witness the acceptance of the waste by the contractor and the stowage in shipping containers
- Provide guidance and support to the NPC and Contractor in their preparation of the documentation needed under the Basel Convention for disposal of stocks

Requirements:

1. Advanced degree in chemistry, geology, environmental science or related subject;
2. Professional qualifications related to waste management.
3. 10 years experience in waste management with a focus on contaminated site assessment;
4. 10 years experience related to implementation of contaminated site remediation;
5. Excellent communication skills in English.

International Consultant: Container Management

Under the overall supervision of the LTO and NPC, the consultant will:

- Supervise the National Consultant to update the report on pesticide containers in Malawi on empty pesticide container management for agricultural, livestock and public health pesticides in and around Blantyre (and Lilongwe), including identifying: the annual quantities by type of container by type of farmer and source of supply; current practices for rinsing and disposing of containers; options for sensitizing users to adopt triple rinsing; options for collecting the empty containers and small quantities of unwanted pesticides from users including the local waste management services, dedicated collection points, reverse distribution through the resellers; and identifying and assessing the national waste management and recycling industry to identify potential recycling/disposal options for each of the container materials
- Propose one or more models for establishing and operating a pilot container management collection storage and recycling scheme for the containers generated in Malawi; specifically in Blantyre, including infrastructure requirements, collection and recycling costs, requirement and costs of any awareness raising activities, institutional arrangements for operating the scheme, its legal basis and perspectives for future sustainable funding mechanisms
- Together with the national consultant, undertake a stakeholder workshop to present the findings of the feasibility study and the proposed model for the establishment of the scheme
- Write a business plan for the agreed pilot scheme, including the detailed set up and operating requirements
- Develop awareness raising materials as required
- Attend workshops and meetings

Requirements

1. Post-graduate degree in agriculture, environmental sciences, chemistry or related fields;
2. At least 5 years' experience in empty pesticide container management;
3. Knowledge of the pesticide industry and regulatory environment in Malawi
4. Excellent report writing skills in English

International IPM FFS Master Trainer

Under the direct supervision of the NPC, CTA and FAO Lead Technical Officer, the consultant will be responsible for the following activities:

- Participate in the Curriculum Development and Training Planning workshop and provide technical inputs into the components of the workshop;
- Assist with conducting and evaluating the TOT and FFS training;
- Advise on the planning, organization and management of Farmers Field Schools and the organization of farmer exchange visits;
- Perform any other related duties that may be assigned;
- Prepare and submit an end-of-assignment report describing the major activities, findings and recommendations.
- Develop Awareness raising materials as required

- Participate in workshops and meetings

Qualifications and experience:

- A higher degree in Agriculture majoring in Extension with a bias towards Agricultural Development and Sustainable Livelihoods.
- At least four years experience of setting up and managing integrated pest management training in Farmers Field Schools.
- Working experience in rural agricultural extension in Eastern/Southern Africa including participatory extension methods and development of requisite material for farmers
- Experience as a trainer of trainers is required and experience with running of IPM FFS for smallholder farmers is a must.
- Ability to work with rural communities, industry and ability to understand their problems and translate them into activities aiming at mitigating them.

International Consultant: Pesticide Management (life cycle management) and IPM FFS

Under the direct supervision of the NPC, CTA and FAO Lead Technical Officer, the consultant will be responsible for the following activities:

- Desk-based literature and document review to contribute to pest and pesticide management baseline data for Malawi
- Draft IPM policy
- Develop training material for inspection and control of pesticides
- Train local staff in post regulation of pesticides and PSMS
- Provide an overview of mechanisms used in different regions (including Europe or others) for information exchange between regulatory bodies responsible for inspection, monitoring, or other enforcement activities and case studies of the most relevant for Malawi
- Act as resource person in development of strategy to strengthen local post registration enforcement capacity, including establishment of a national information exchange system
- Develop field and sampling tools to refine the desk study and participate in survey for pest and pesticide management ; including identification of hotspots for heavy pesticide use including HHPs
- Act as resource person for development of FFS curriculum on IPM, SCA and Decent Work
- Act as resource person and participate in IPM Training of Trainers
- Review existing data collection tools for surveys of farming practices and pesticide use, and develop appropriate tool to collect baseline and final year data on farmer pest and pesticide management practices and particularly use of alternative methods
- Identification and ranking of all alternative non-chemical practices identified after data collection, and proposal for demonstrating these in a new demonstration site
- Assistance in planning and establishing demonstration sites for non-chemical alternatives identified
- Participate in workshops and meetings as required
- Develop awareness raising materials as required

Requirements:

1. Post-graduate degree in agriculture, environmental sciences, chemistry or related fields;
2. At least 5 years experience in pesticide management and/or environmental regulation and risk-based approaches

3. Knowledge of pesticide industry in Malawi and the rest of Southern Africa
4. Knowledge of international best practice in regulations for inspection of chemical, pharmaceutical or pesticide products
5. Knowledge of international best practice in undertaking inspections of chemical, pharmaceutical or pesticide products
6. Excellent report writing skills in English

National Communications Consultant (all components)

Under the direct supervision of the PC, CTA and FAO Lead Technical Officer, the consultant will be responsible for the following activities to support the communication of project outputs and the visibility of the project impact:

- Consult with project partners and consultants responsible for delivery of all outcomes and 4 to understand the project expected results on disposal of obsolete stocks and remediation of contaminated sites, container management, strengthening of legal and institutional frameworks to strengthen life cycle management and the promotion of alternatives to chemical pesticides; and the actions and roles of each partner in delivering the outcomes
- Prepare an outline communications plan to achieve the above results, identifying specific communication outcomes (behaviour changes), relevant audiences, key messages and channels, which supports the activities of the implementing partners
- Produce and assist in the dissemination of any communications tools as identified in the plan (publications, media interviews, training, etc)
- Contribute to the M&E plan as needed (monitor media coverage, produce data for indicators on target audiences etc)

Requirements:

1. Advanced degree in communications, development, psychology, media studies or other relevant subject;
2. 10 years experience in communications for development
3. 2-3 years experience related to agricultural or pesticide awareness raising
4. Excellent communication skills in English and Chewa.

National Consultant – Contaminated sites

Under the direct supervision of the NPC, CTA and International Consultant on contaminated sites, the national consultant will be responsible for leading the national team in completing the rapid environmental assessment (REA) field work:

- develop detailed site specific sampling plans including provisional conceptual site models;
- carry out the intrusive investigations of the prioritized sites including implementation of the sampling plans.
- Contribute to the final conceptual site models and site specific Environmental Management Plans (EMPs);
- Discuss the site specific proposals with the international consultant and facilitate selection and adoption by the whole national team;

- Establish and agree work plans, budgets, and logistical arrangements including contracts with members of the national teams where needed, for the implementation of the site remediation plans
- Monitor the results of the site remediation including coordinating laboratory analyses and presentation to national workshops

Requirements:

1. Advanced degree in chemistry, geology, environmental science or related subject;
2. Professional qualifications related to waste management.
3. 5 years experience in waste management with a focus on contaminated sites;
4. Excellent communication skills in English.

National Consultant – Container Management

Under the overall supervision of the LTO, NPC and international consultant (Empty Pesticide Container Management), the National Expert (Empty Pesticide Container Management) will support the development of the pilot scheme business plan and establishment of facility. In particular, he/she will:

- Provide desk and field research to update the PPG study into pesticide containers in Malawi including estimating the current level of practice of “triple rinsing”; national capacity and options for collection and recycling
- Support the stakeholder workshop to present the findings of the assessment and propose options, and develop recommendations for the national container management scheme.
- Maintain contacts with all relevant private sector and government and non-government sectors e.g. at annual stakeholder meetings to review and discuss progress and results in operation of pilot facility to propose and define a sustainable long term model for operation

Requirements

1. Post-graduate degree in agriculture, environmental sciences, chemistry or related fields;
2. At least 5 years experience in container management;
3. Knowledge of the pesticide industry and regulatory environment in Malawi
4. Excellent report writing skills in English

National Consultant – Pesticide Management

Under the overall supervision of the International consultant, CTA and PC, the National Pesticide Expert will undertake an assessment of capacity and activity for inspection of pesticides throughout the life-cycle of pesticides in Malawi from entry point through formulation, storage, distribution, retail and use. The review should include both government and private sector inspectors. In particular, he/she will:

- Evaluate inspection actors and activities from government and private sector inspection and pesticide management regional MoA services responsible for inspection of pesticides, customs inspectors, quarantine officers, other government inspection staff, and private sector inspectors involved in pesticides inspection and quality control.

- Assess information produced, available and shared by each inspection activity including resources – funds, infrastructure and equipment, Guidelines and directives, and current regulations governing inspection at each point of the life-cycle, current manuals, guidelines and checklists for inspection
- Prepare drafts for establishment a national information exchange system and strategy to strengthen post registration enforcement
- Review and analyse the existing legislative and institutional framework related to pesticide management and working closely with International consultant, national legislation Consultant and FAO Legal officer; review, discuss and advise on planned activities;
- Prepare a report for review by the International Consultant (Pesticide Management) for establishment of a local information exchange system with recommendation for key participants and modalities (who, when, what based on the patterns of use of pesticides in the country); strategy to strengthen enforcement capacity of the PCB, awareness raising and training need
- Perform training with the international consultant and attend meetings and workshops as required

Requirements:

1. Post-graduate degree in agriculture, environmental sciences, chemistry or related fields;
2. At least 5 years experience in pesticide management;
3. Knowledge of the pesticide industry and regulatory environment in Malawi.
4. Excellent report writing skills in English

National Consultant – Legislation development

Under the direct supervision of the LEGN, NPC and CTA, the consultant(s) will be responsible for the following activities:

- Review and analyse the existing legislative and institutional framework related to pesticide management;
- Working closely with lead international consultant and FAO Legal officer; review, discuss and advise on planned activities;
- Working closely with FAO Legal Office, prepare draft Regulations
- Participate all workshops and meetings as required
- Support and guide the approval process for the Draft Regulations,

Requirements:

1. Advanced degree in Law
 2. At least 5 years experience in development of Pesticide Legislation
- Excellent communication skills in English.

National Consultant – Monitoring and Evaluation

Under the overall supervision of the NPC and CTA, the M & E national Consultant will assist in the elaboration of a system to effectively and efficiently monitor the outcomes and quality of the program. The Consultant will be responsible for the following:

- Be responsible for the overall execution of the M&E activities
- Assess and provide reports to the CTA and NPC on the level of quality in the execution of the project components
- Compile and keep accurate and up-to-date records of each output supervise and communicate closely with the focal point trainers
- Contribute to the development of tools for measurement of agronomic, socio-economic and environmental impacts resulting from the interventions/project activities;
- Contribute to the Training-of-Trainers (ToT) in collaboration with national and international consultants;
- Contribute to the organization of workshops and training related to M&E in collaboration with national and regional partner institutions;
- Participate in meetings and workshops at national and regional levels at the request of the NPC;
- Address other tasks at the request of the CTA and NPC.

Requirements:

- Experience on Monitoring & Evaluation, including participatory and community-based M&E approaches and methods;
- Hold a technical degree related to agriculture and impact assessment and monitoring and evaluation, with at least 5 years experience;
- Experience in organization and management of community-based programs;
- Ability to work well in the field and have excellent rapport with field-based technicians and farmers;
- Excellent communication skills in English

Budget and Operations Officer

Under the direct supervision of the FAO Budget Holder, the Budget and Operations Officer will:

- Ensure smooth and timely implementation of project activities in support of an approved, results-based workplan, through operational and administrative procedures according to rules and regulations of FAO and the donor(s);
- Coordinate the project's operational arrangements through contractual agreements with key project partners;
- Be operationally responsible for Letter of Agreements with relevant project partners;
- Responsible for the day to day management of the project's budget including monitoring of cash availability, and for preparation of budget and project revisions for review by the Budget Holder;
- Responsible for ensuring accurate recording of all relevant data for operational, financial and results-based monitoring;
- Responsible for ensuring that relevant reports on expenditures, forecasts, progress against work-plans, and closure of projects are prepared and submitted in accordance with defined procedures and reporting formats, schedules and communication channels, as required;
- Responsible for accurate and timely actions on all operational requirements for personnel related matters, equipment and materials, and field disbursements;
- Assist with preparation of Terms of Reference of consultants and short-term staff assigned to the project;
- Undertake any other duties as required.

Requirements:

1. Degree in finance or related subject;
2. 5 years experience in project operation and management;
3. Excellent communication skills in English.