



**FAO/GLOBAL ENVIRONMENT FACILITY  
PROJECT DOCUMENT**



<b>PROJECT TITLE:</b> Disposal of POPs and obsolete pesticides and strengthening sound pesticide management in Cameroon	
<b>PROJECT SYMBOL:</b> GCP/CMR/031/GFF	
<b>Recipient Country:</b> Cameroon	
<b>Resource Partner:</b> Global Environment Facility	
<b>FAO project ID:</b> 613309	<b>GEF Project ID:</b> 4641
<b>Executing Partner(s):</b> MINADER, MINEPDED (Government of Cameroon)	
<b>Expected EOD (starting date):</b> 01 November 2014	
<b>Expected NTE (End date):</b> 31 October 2018	
<b>Contribution to FAO's Strategic Framework</b>	Strategic Objective 2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner
<b>GEF Focal Area:</b> Chemicals (Persistent Organic Pollutants – POPS)	
<b>GEF Strategic Objectives:</b> CHEM-1 Outcome 1.4 POPs waste prevented, managed and disposed of, and POPs contaminated sites managed in an environmentally sound manner	
<b>Environmental Impact Assessment Category:</b> B	
<b>Financing Plan:</b> GEF allocation:	USD 1,710,000
<u>Co-financing:</u>	
University of Ngaoundere, Faculty of Sciences	<b>USD 1,325,000</b>
AFAIRD	<b>USD 300,000</b>
Ministry of Agriculture & Rural Development	<b>USD 4,311,212</b>
MINEPED	<b>USD 480,000</b>
CREPD	<b>USD 1,000,000</b>
CropLife	<b>USD 1,721,162</b>
FAO managed co-finance	<b>USD 170,000</b>
Subtotal Co-financing:	<b>USD 9,307,374</b>
<b>Total Budget:</b>	<b>USD 11,017,374</b>

## EXECUTIVE SUMMARY

Agriculture is regarded as the engine of Cameroon's economy with a significant contribution to GDP. The staple crops produced are: cacao, coffee, bananas, plantain, food crops, fruit crops and market garden produce.

Cameroon's climatic conditions are conducive to the proliferation of pre- and post-harvest pests and diseases. This causes annual crop losses in excess of about 40%. As a consequence, Cameroon imports an estimate of 25,000 tons of solid pesticides and 3 million litres of liquid pesticides annually, at an estimated FCFA 12.5 billion every year.

Weaknesses in the capacity of responsible institutions and actors to effectively manage pesticides and associated wastes throughout their lifecycle, and gaps in the legal and regulatory framework in Cameroon have led to the accumulation of obsolete pesticide stockpiles and contamination of sites. It is estimated that the total amount of obsolete pesticides and heavily contaminated materials is currently 100 metric tonnes. There are at least six sites with significant amounts of soils contaminated with pesticides. Because there is no systematic treatment and recycling system for empty pesticide containers in place, containers remain in circulation due to their high intrinsic value as a storage vessel for food, water and other commodities. These pose threats to food quality, public health and create a potential source of long-lasting contamination for ground and surface waters as well as for other environmental matrices. The overall project objective is to reduce the negative impact on public health and the environment from uncontrolled releases of obsolete pesticide and contaminated sites, and to strengthen the capacity for the sound management of pesticides in the future. The project will eliminate currently safeguarded stocks of obsolete pesticides, including persistent organic pollutants (POPs) and associated wastes, and develop a program geared towards preventing further accumulation of stocks in Cameroon through training and capacity building in the integrated management of pests and pesticides throughout their lifecycle.

The project has been structured into five components. Specific objectives of each component are to: safely destroy POPs and obsolete pesticides and remediate pesticide-contaminated sites (Component 1); implement a system of management of empty pesticide containers, including rinsing by users, collection, storage, segregation and volume reduction, and recycling (Component 2); strengthen the regulatory framework and bolster the Government of Cameroon's institutional and technical capacity to ensure sound management of pesticides focusing on legislation, the National Phytosanitary Council, pesticide inspection and analysis, information exchange, laboratory capacity and registration (Component 3); and to increase the successful uptake of alternatives to chemical pesticides on key crops (Component 4). These four components will be supported by horizontal project management and Monitoring and Evaluation (Component 5) and awareness/communication strategies which will inform project execution decisions and create the necessary conditions for beneficiary knowledge and participation in project activities.

The key project executing partners are the Ministry of Environment, Protection of Nature and Sustainable Development (MINEPDED) and the Ministry of Agriculture and Rural Development (MINADER). 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 four years and a budget of USD 11 017 374, of which USD 1 710 000 is GEF financing and USD 9 307 374 is co-financing.

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## GLOSSARY OF ACRONYMS

ACP MEA	African Caribbean Pacific countries EC funded Multilateral Environmental Agreements project executed by FAO
AFAIRD	Association des Femmes Africaines Intègres pour la Recherche et le Développement
AGP	Plant Production and Protection Division of FAO
ANOR	Agence des Normes et de Qualité ( )
ASP	African Stockpiles Programme
AWP/B	Annual Work Plan and Budget
BH	Budget Holder
CEMAC	Central African Economic and Monetary Community
CEO	Chief Executing Officer (GEF)
CILSS	Comité Permanent Inter-Etats De La Lutte Contre La Sècheresse Dans Le Sahel
CNP	Conseil Nationale Phytosanitaire
CPAC	Central African Inter-state Pesticides Committee
CNHPPCAT	Commission nationale d'Homologation des Produits Phytosanitaires et de Certification des Appareils de Traitement
CPF	Country Program Framework
EMTK	Environmental Management Toolkit (obsolete pesticides management)
EP	Executing Partner
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GEBs	Global Environmental Benefits
GEF	Global Environment Facility
GEFSEC	GEF Secretariat
IPPC	International Plant Protection Convention
IPM	Integrated Pest Management
IRAD	Institut de Recherche Agricole pour le Développement
LNAD	Laboratoire National d'Analyse Diagnostique des Produits et Intrants Agricoles
LTO	Lead Technical Officer
LTU	Lead Technical Unit
M&E	Monitoring and Evaluation
MINADER	Ministry of Agriculture and Rural Development
MINEPDED	Ministry of Environment, Protection of Nature and Sustainable Development
MINSANTE	Ministry of Public Health
MRL	Maximum Residue Limit
NGO	Non-Governmental Organization
NIP	National Implementation Plan (Stockholm Convention)
NPC	National Pesticides Council/National Project Coordinator
NRPC	National Pesticide Registration Committee
OP	Obsolete pesticides
PIF	Project Identification Form (GEF)
PIR	Project Implementation Review
PMT	Project Management Team
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
SDRP	Sous-Direction des Pesticides, Engrais et Appareil de Traitement (MINADER)
STAP	Scientific and Technical Advisory Panel
TCI	Investment Centre Division (FAO)
TCP	Technical Cooperation Programme

TOR	Terms of Reference
USD	United States Dollar

# 1 SECTION 1: RELEVANCE

## 1.1 GENERAL CONTEXT

Climatic conditions in Cameroon vary from tropical in the south to arid in the north allowing the production of a wide range of vegetables, fruits and grains for domestic consumption and for export to Central Africa and the European Union (EU). Agriculture is regarded as the engine of Cameroon's economy, accounting for 23.6% of GDP in 2012<sup>1</sup>. The staple crops produced are: cacao, coffee, bananas, plantain, food crops, fruit crops and market garden produce.

Cameroon's climatic conditions, however, are not only favorable to the production of the various crops and fruits, but are also conducive to the proliferation of pre- and post-harvest pests and diseases. This causes annual crop losses in excess of 40%. As a consequence Cameroon imports an estimated 25,000 tons of solid pesticides, and 3 million litres of liquid pesticides annually, at an estimated FCFA 12.5 billion every year<sup>2</sup>

The lifecycle management of pesticides is very weak in Cameroon, which has led to the accumulation of obsolete stocks and significant contamination of soils at a number of sites. Pesticides are not routinely inspected and controlled for their conformity to FAO/WHO specifications and are often applied by farmers without adequate training in health and safety practices. There are reports that persistent organic pollutant (POPs) pesticides including DDT, endosulfan and lindane are subject to illegal trafficking and are used in agriculture and public health. These illicit practices pose potential threats to food quality, public health and create a potential source of long-lasting contamination for ground and surface waters as well as for other environmental matrices.

### Legal, policy and institutional context

The Government of Cameroon has ratified the Rotterdam (May 20, 2002), Basel (February 9, 2001) and Stockholm (May 19, 2009) conventions. It has also completed its National Implementation Plan (NIP) under the Stockholm Convention. Cameroon's NIP, completed in December 2012, includes four key priorities and action plans: strengthening of the institutional and regulatory framework; management and disposal of POPs and DDT; management and disposal of PCBs and materials containing PCBs; and reducing releases of unintentionally produced POPs, including PCBs.

Sub-regionally, Cameroon is a member state of the Central African Economic and Monetary Community (CEMAC). In 2005 CEMAC members adopted the Common Regulation Binding the Homologation of Pesticides in Central Africa (CEMAC, 2006). This is a common, regional, pesticide registration scheme for the six member states of CEMAC, and is intended to replace the national registration schemes. The executive body of the Common Regulation is the Central African Inter-state Pesticides Committee (CPAC) that has its secretariat in Yaoundé, Cameroon, and is in the process of building technical and administrative capacity.

CPAC has published fairly detailed data requirements for pesticide registration (CEMAC, undated), but no formal technical dossier evaluation procedure or acceptability criteria have yet been established and published. Although it is unclear how the transition from national to regional pesticide registration will take form, and when this process is expected to be completed, any national-level activities related to registration should take the requirements of the Common Regulation into account.

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<sup>1</sup> African Economic Outlook, 2013, <http://www.africaneconomicoutlook.org/fileadmin/uploads/aeo/2013/PDF/Cameroon%20-%20African%20Economic%20Outlook.pdf>, accessed 20 October 2013

<sup>2</sup> GCP/CMR/GEF\_PPG Composante 2: Mise en œuvre d'un système de gestion des emballages vides de pesticides Rapport Du Consultant

At the national level, the National Registration Commission of Phytosanitary Products and Certification of Sprayers established in 1996, is an inter-ministerial body responsible for import/registration of pesticides in Cameroon. By 2012 it had met more than 20 times and registered over 540 products, over 900 pesticide retailers and distributors, and 36 phytosanitary treatment companies. A second body created in 2006, the National Phytosanitary Council (CNP), is nominally responsible for coordinating all pesticide management activities in the country, but is not functional, and has never met.

The review of the legal, regulatory and legislative framework on management of pesticides completed as part of project preparation activities outlined both inadequacies of current pesticide regulations used in public health and hygiene, and also called attention to the existence of overlapping jurisdictions at institutional level. According to the review, Cameroon lacks a specific law governing pesticides. Pesticides are addressed by fragmented legislative texts. Pesticide management is referenced in: Law n° 2003-003 of 21 April 2003 on plant protection and its implementation provisions; Law n° 96/12-003 of 5 August 1996 establishing a framework for environmental management and its implementing provisions; and Law n° 89/27 of 29 December 1989 on toxic and hazardous wastes. In all of the aforementioned laws there are overlapping elements, reflected by overlapping but imprecise mandates for the relevant ministries. For example, responsibility for preventing the use of hazardous chemicals falls to the Ministry of Public Health (MINSANTE) for public health, Ministry of Agriculture and Rural Development (MINADER) for agriculture, and MINEPIA for fisheries and animal husbandry. Furthermore, many of the legal texts do not have implementation provisions or regulations to guide the various ministries and services in consistently applying the laws in practice.

Numerous decrees also exist, these include: Decree 2005/0770/PM of 6 April 2005 on procedures for carrying out phytosanitary protection; Decree 2005/07769/PM of 6 April 2005 on the organization of the National Phytosanitary Council; Decree 2005/0771/PM of 6 April 2005 on carrying out plant quarantine operations; and Decree 2005/0772/PM of 6 April 2005, on registration and protection of phytosanitary products. A draft law regulating management of empty pesticide containers in Cameroon is currently being prepared, and Decision N°004 of 24 October 2012 on non-biodegradable packaging requires producers, importers or distributors to establish a collection and treatment system but does not cover pesticide containers.

In terms of ministerial responsibilities, since 2005, the Ministry of Agriculture and Rural Development (MINADER) is responsible for pesticide management, through its technical agency Sub-Office for the Regulation of Pesticides, Fertilizers and Application Equipment (SDRP) and the National Laboratory for the Analysis of Agricultural Products and Inputs. Operationally, the government has established 10 Provincial Inputs and Agricultural Products Control Services and 10 Provincial Phytosanitary Bases with members from the Department of Phytosanitary Brigades; as well as 32 Phytosanitary Police border posts (air ports, and road). Cooperation between customs border agents and Phytosanitary Police is ineffective, leading to gaps in border control and poor information exchange. The Ministry structure includes 80 Phytosanitary Inspectors and Phytosanitary Controllers although many of these have retired or are not actually sworn in.

The Ministry of Environment, Protection of Nature and Sustainable Development (MINEPDED) is responsible for the development and implementation of Cameroon's national waste management strategy, which aims to enhance the living conditions of the population through: implementing efficient waste management through better collection in urban areas; the promotion of appropriate methods of waste processing and recycling and beneficiation; management of hazardous wastes produced by households, medical facilities and the private sector; promotion of incentives to spur voluntary stakeholders' commitment to efficient waste management; and strengthening of international cooperation in the management of trans-boundary movements of hazardous wastes.

The Ministry of Public Health (MINSANTE) is responsible for management of pesticides used in public health (vector control and domestic hygiene). Following a WHO-Gates Foundation supported



initiative in 2008, a steering committee and National Strategy for Integrated Management of Pesticides Used in Public Health in Cameroon (June 2013) was established. Many of the seven axes of this strategy align closely with the proposed project outputs (including legislation, behaviour change communication, stakeholder engagement, capacity building, and post-registration control). The new MINSANTE organogram established by Décret N°2013/093 in 2013 gives responsibility for registration of public health pesticides to a new unit, the Health Promotion Unit in the Environmental Hygiene service; MINSANTE is also represented on the national pesticide registration committee mentioned above. In terms of post-registration control, a Ministerial Decision in 2012 established decentralised Regional Centres for Prevention and Control of Epidemics (CRPLE), which are responsible for some aspects of control, monitoring and distribution of public health pesticides. There is one Poison Centre and some health statistics are maintained on intoxications.

## 1.2 RATIONALE

### a) Issues to be addressed

Weaknesses in the capacity of responsible institutions and actors to effectively manage pesticides and associated wastes throughout their lifecycle, and gaps in the legal and regulatory framework in Cameroon (as described above) have led to the accumulation of obsolete pesticides stockpiles and contamination of sites. Specific issues to be addressed by the GEF funded project are outlined below.

**Obsolete pesticide stockpiles and contaminated sites:** FAO supported the inventory of obsolete pesticide stores and contaminated site in 2009. Data collected and entered into the Pesticide Stock Management System (PSMS) indicated substantial amounts of pesticides (over 280 tonnes) stored in over 97 locations in 10 Provinces. This data was used as the basis for the development of the PIF for the project. A review of this data completed as part of the PPG process highlighted that significant quantities of this material were usable and in many cases had been sold. The situation was confirmed as part of a CropLife International (CLI) safeguarding exercise which was completed in 2012. The exercise confirmed that all stockpiles from the largest stores identified in PSMS were now used. Over 3 missions, the CLI team achieved the safeguarding of approximately 45 metric tonnes of obsolete pesticides to a central storage location at Edea. Consultations with CLI representatives and national personnel involved in the inventory process have confirmed that the amount of obsolete pesticides stored at Edea is likely to constitute about half of the total amount of stocks which will need to be removed from the country. The remaining stocks are understood to remain in private hands and as with all projects of this type will only be released once a public outreach campaign confirms that the stocks will be removed and sent for disposal. It is therefore estimated that the total amount of obsolete pesticides and heavily contaminated materials requiring environmentally sound disposal under this project is 100 metric tonnes, in contrast to the 330 metric tonnes identified in the PIF.

A review of the PSMS data collected in five of Cameroon's 10 regions in 2009 has identified 6 high-risk locations where there are significant amounts of soils contaminated with pesticides (presented below). In addition to these sites, a number of others have been identified including during Croplife safeguarding activities (see Table). Additional sites are likely to exist where producers have buried unknown quantities of stocks in the past. The amount of contaminated soil is far higher than originally anticipated in the PIF and it is now proposed that the project focus efforts on quantifying the amounts of material for treatment and developing plans for risk reduction via on-site remediation of the sites.

Store location	Estimated amount of soil (kg) from PSMS	Contaminant	Risk Factor ( $S_p$ ) from PSMS
BASE PHYTO OUEST	16,380	Unknown	458,640
BRIGADE PHYTOSANITAIRE DU	24,960	Unknown	698,880

MOUNGO			
CAPLABAM MBOUDA	11,550	Unknown	323,400
FERME QUINQUINA (3 Hot Spots)	72,300	Unknown	2,000,000
MINEPIA REGIONAL VET CLINIC	9,000	Unknown	252,000
PHYTO BASE INTERVENTION STORE MILE 3 NKWEN	105,000	Unknown	2,000,000
<b>Additional stores:</b>			<b>Description of site</b>
GAROUA (Brigade Phytosanitaire store)		5 tonnes of dieldrin and fenthion removed 04/10	Eye trouble, nausea, and general dizzy turn within 2-3 mins inside store
LAGDO (entrance of the dam), outdoor one of 2 stores	Some products exploded here in 2009, killing a child. Drums are damaged and have leaked into the ground.		
BERTOUA (Base phytosanitaire store)	Reports indicate a former employee of this phytosanitary base has died, assumed following pesticide intoxication as he was using the indoor store as his office.		
WUM (MIRUPDEP store)	The store was completely contaminated by leakage from damaged containers..		

From the above table it is noted that there is currently no analytical data on the type of contaminant and level of concentration. The amounts of soil are calculated based on visual inspection of the sites with an estimate of the surface area showing visible signs of contamination. The PSMS system then calculates an amount based on the soil type entered into the systems and assigns a standard depth of contamination at 10cm. Due to limited funds, a more detailed review involving sampling and analysis was not completed as part of the PPG.

**Weak capacity for the management of pesticide waste including empty containers:** The PPG allowed for a complete review of container management capacity in Cameroon. A clear picture has emerged as to the current status of container management and the areas where the project can have maximum positive impact resulting in risk reduction. Containers remain in circulation due to their high intrinsic value as a storage vessel for food, water and other commodities. Awareness of the risks from pesticide container usage remains low and the legal framework covering the management of pesticide containers is fragmented and in most cases not applied. Some container management schemes do operate in the wood treatment sector (creosote) and in cash crop production zones where large-scale pesticide users may require suppliers to take back empty containers – however these are indefinitely stored and there is no systematic treatment and recycling system in place. These schemes are generally *ad-hoc* but form a basis on which the project can build. The project will therefore focus on supporting the development of the necessary legal and regulatory framework to encourage pesticide vendors and producers to develop plans for take-back and treatment of the containers they sell. This will be linked to an outreach and communications campaign aimed at raising awareness on health issues linked to use of pesticide containers which will target vulnerable groups such as women and children who are often the sectors of society most exposed to risks from container use. The project will build on existing programmes to develop pilot programmes in two agro-ecological zones based on intensity of pesticide use. The lessons learnt from this process will inform the development of a national strategy for pesticide container management.

**Weak regulatory, institutional and technical capacities for pesticide life cycle management:** As discussed in Section 1.1, legislation on pesticides is split across separate instruments and many gaps

remain. While the National Registration Commission of Phytosanitary Products and Certification of Sprayers does meet regularly and is supported by government agents in the regions, it lacks technical capacity to evaluate dossiers, and testing is limited to efficacy testing but does not cover equivalence assessment, setting Maximum Residue Limits (MRLs), or environmental or exposure evaluations for example. Pesticide inspections and control at the border are conducted by the Ministry of Agriculture and Customs. While importers are required to obtain a permit for specific quantities from MINADER, data on quantities actually imported is not collected – in 2007, the estimates of Croplife Cameroon (representing only 6 companies at that time) exceeded official Ministry of Agriculture estimates of imports by 65%<sup>3</sup>. There is a lack of data on pesticide registrations, imports and distribution in the country, and information that does exist is not published or systematically shared between stakeholders.

Post-registration and import, inspection and control of pesticides and pesticide-related activities within the country is very weak, partly due to a lack of resources and staff. While trained staff may be available at the provincial level, this is often not the case at the district/local level of MINADER. Many designated staff at MINADER are not formally sworn in, limiting their legal power as inspectors. As a result, inspections of pesticide distributors and retailers, and of large pesticide users, do not occur on a regular basis. In 2008 there were 900 authorized pesticide retailers and 30 professional companies registered (CPAC, 2008). A National Phytosanitary Council created in 2005 to coordinate pesticide activities is not yet operational, and so all pesticide management activities conducted in the country are not effectively coordinated or directed.

**Limited knowledge and/or availability of registered alternatives to chemical pesticides:** Croplife Cameroon estimated in 2007 that 35% of all imported pesticides were for cotton pest control. While there are now no POPs among the 578 registered pesticides (the national registration committee de-registered 4 formulations containing endosulfan between April and Sept 2013), 37% of registered products are in WHO classes I and II; and of the 44 insecticides registered for cotton, 28 are considered Highly Hazardous Pesticides (HHP). The recently de-registered products containing endosulfan were and likely still are widely available to farmers; and, in the cotton growing areas, lindane, despite being officially banned, is also used in formulations, including Termitox and Red Powder. The need to identify and promote alternatives to farmers is essential to reduce demand for these products, in conjunction with preventing illegal trade through component 3 described in section 2.

As of 2007, of the 550 pesticides products registered in Cameroon, only five of these were bio-pesticides. Neither Spinosad nor Azadirachtin, both active ingredients of bio-pesticides used in neighbouring CILSS countries, are registered in Cameroon, as very few laboratories or research teams develop bio-pesticides as alternatives to chemical pesticides. Companies, including Abossafrique, import and distribute unregistered bio-pesticides, including organic agricultural inputs (biological insecticides and organic fertilizers) and phytosanitary products such as Humiforte 20, Fosnutren 20, Aminol 20, Kadostim 20, Dipel 2X and DIPEL DM. In addition to promoting biopesticides, agroecological alternatives such as IPM have been introduced in the North in the past by the cotton company SODECOTON as part of its production support, but the long term adoption of the techniques has never been monitored or assessed.

Addressing all these issues is crucial in order to reduce current and future risks to human health and the environment.

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<sup>3</sup> Van der Valk (2009) Development of a national action plan for the sound management of pesticides in Cameroon [with particular attention to public health pesticides], Mission report Yaoundé, 12 – 29 January 2009

## **b) Baseline and co-financing initiatives**

### **Obsolete Stockpile Initiatives**

**CropLife:** As part of its co-finance for project preparation activities, CropLife International has undertaken several obsolete pesticide identification and disposal exercises in Cameroon. CropLife has disposed of over 7 metric tonnes of POPs and safeguarded a further 44.9 metric tonnes of obsolete pesticides which are stored at the Edea collection centre. Through CropLife Africa Middle East support has also been provided on product stewardship and safe use programmes. A total of USD 1.7M of co-finance has been provided to this project from CropLife organisations.

**Capacity Building related to Multilateral Environmental Agreements in African, Caribbean and Pacific (ACP) countries “The clean-up of obsolete pesticides, pesticides management and sustainable pest management” Project:** Cameroon was one of the beneficiaries of this global project which was implemented from 2009-2013. Activities included: a training course on the safe inventory of pesticides; a training session on PSMS organized in 2010, for four engineers from the Department of Regulation and Quality Control of Inputs and Agricultural Products, who then entered the national inventories along with the list of registered pesticides in the country into PSMS; and two workshops on technical and institutional needs for strengthening national capacity to reduce pesticide risks to human health and the environment.

Some experience in PCB-contaminated soil sampling and assessment was conducted in the preparation of the NIP, but there has not been any previous attempt to deal with pesticide-contaminated soils.

### **Pesticide Container Management Initiatives**

**Private sector initiatives:** Some systems have been introduced by companies and flagship plantations including: AES- SONEL, PROLOG, and CDC. AES-SONEL’s system includes an internal procedure for the management of empty pesticide containers, namely ‘cubitainers,’ large-capacity plastic containers, which contained a hazardous insecticide Tanalith. Empty cubitainers are rinsed with plain water (use of solvents is prohibited) which is then used for the treatment of wooden poles. The rinsed cubitainers are labelled ‘*Hazardous Waste - Unfit for use by households*’ and reused in thermal plants, at the wood pole treatment unit in Bafoussam, in the network for storage and transportation of waste transformer oils, or in the production process of an industrial plastics processing plant. Others are pre-punched and made available to a hazardous waste treatment company. Some agribusiness companies, such as Cameroon Development Cooperation (CDC), have signed protocols stipulating that empty pesticide containers must be returned to suppliers. However awareness among CDC staff and the general public, who reuse empty pesticide containers for a variety of domestic reasons, is very low. Selling empty pesticide containers and reusing them to store liquids such as milk, oil, honey and drinking water are common practices. Unattractive empty pesticide containers are incinerated, buried in the ground or abandoned.

### **Legislation and Regulation Initiatives**

**Government of Cameroon CPAC Compliance Initiatives:** As discussed in Section 1.1, Cameroon is a member of CEMAC and is bound by the CPAC, although this has not yet become operational and has not replaced the national arrangements for registration and regulation of pesticides. However, significant investment has been made by the GoC to establish the CPAC headquarters in Yaoundé and in the provision of technical and administrative capacity.

**Support phytosanitary capacity building in member countries of ECCAS and CEMAC project:** This project, which was completed in December 2013, focused on phytosanitary protection capacity development. The main results of the project in Cameroon were a diagnostic evaluation of phytosanitary capacities, including a number of technical capacity building workshops, and initial steps toward developing a national phytosanitary strategy. However unlike the majority of the

participating countries (Burundi, Congo, RCA, DRC, Gabon, Equatorial Guinea and Chad), Cameroon did not complete this process or draft texts of law and/or regulations on plant protection.

Other outputs included the development of: draft regional protocol for cooperation on IPPC governance in the ECCAS-CEMAC; a guide on legislative drafting on plant protection drafted; and documentation on lessons learned on the implementation of the project.

**WHO/Gates Foundation project (Projet OMS/Fondation Gates Sur Les Risques Sanitaires Liées A L'utilisation Des Pesticides):** This project focused on public health pesticides and reviewed pesticide management in Cameroon, producing among other things Needs assessments for laboratories for residue analysis and pesticide quality control; and a Situation Analysis and mission report detailing the management of the pesticide life cycle, from which an Action Plan was developed for pesticide management (2009). Unfortunately the Action Plan was not formally adopted and the project terminated without implementing it. However, this is a foundational document from which Component 3 has been developed.

### **Alternatives and IPM Initiatives**

**Projet pilote d'appui à la mise en place d'une information Phytosanitaire sur la protection intégrée des cultures dans la zone forestière du Cameroun,** was a pilot project on integrated ecosystems management aiming to improving the production of maize and vegetables in southern Cameroon that closed in summer 2013. It established and documented pest control and pesticide use practices among representative sample of farmers in the Forest Zone, and trained 64 extension agents in maize IPM.

**Programme d'Urgence pour la Reduction des Residus de Pesticides dans le Cacao et Café Camerounais:** was put in place after agricultural products from Central Africa were denied access to the international market because of either high levels of pesticide residues or the presence of quarantine pests (COLEACP, 2009), and the Government of Cameroon is currently undertaking a project to control pesticide residues in coffee and cocoa which are the main export crops.

**University of Ngaoundere, Faculty of Sciences:** The University supports students in conducting research projects, which will be available to support project needs in field research on alternatives among other issues.

**AFAIRD:** The NGO is currently developing a guide on alternative agricultural practices and will also develop a project on agroforestry good practices. **AFAIRD** and **CREPD** will provide cross cutting awareness and communications support to the project in all four components, as well as taking an active part in the consultations and stakeholder meetings on pesticide and container management.

### **c) Incremental cost reasoning**

The 45 metric tonnes of obsolete pesticides stock safeguarded by CropLife at a central storage in Edea needs to be disposed of urgently. The delay in the disposal of this stock increases the risk of contamination of the surrounding environment, as well as vandalism. The GEF incremental funding is needed to undertake the disposal of the remaining obsolete stocks including those currently in private hands, as well as the treatment of heavily contaminated sites. Without the GEF-funded intervention, the deteriorating stockpiles of obsolete pesticides including POPs and heavily contaminated sites will continue to pose an immediate risk to human health and the environment.

In addition to directly removing the obsolete stockpiles and remediating the remaining sources of obsolete pesticide, proposed incremental activities will improve pesticide management in Cameroon, addressing the root causes for accumulation of these wastes and preventing future stockpiles.

The project will build on existing initiatives and provide support to the legislative and regulatory system to minimise risks from old pesticide containers, with an emphasis on protecting vulnerable groups. The support to legislators, creation of awareness in vulnerable groups such as women and children, the development of pilot programmes and the development of a national strategy for container management will have a significant impact on reducing the risk from this source of

exposure. The project will establish comprehensive pesticide legislation and regulations, and focus on strengthening the capacity to enforce the regulations.

To address the demand-side issues, specific pilots on alternatives to key Cameroon crops in two agro-ecological zones will be conducted, and the importance of alternatives communicated to the wider community, with a view to promoting widespread uptake of alternatives to highly hazardous pesticides, thereby decreasing the risks posed by these chemicals.

### 1.3 FAO'S COMPARATIVE ADVANTAGE

The mandate of FAO includes prevention and management of agricultural pests; safe distribution and use of pesticides including their disposal as governed by the International Code of Conduct on Pesticide Management (2012); and the control of international trade in hazardous pesticide formulations as governed by the Rotterdam Convention on Prior Informed Consent. A specific mandate from the FAO Council instructed FAO to assist countries in reducing risks from pesticides. In addition, the Plant Production and Protection Division of FAO (AGP) provides guidance on the Sustainable Production Intensification of Crops with a particular focus on ecological approaches as embodied in Integrated Pest Management (IPM), which is able to reduce reliance on chemical pesticides, and on migratory pest control, which has been a major cause of obsolete pesticide stockpiles.

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 60 countries.

AGP has been advocating IPM for over three decades through the FAO Regular Programme and extra-budgetary funding from various financial support sources. The Global IPM Facility, established in collaboration with the World Bank in the 1990s, was hosted in AGP and significantly boosted the dissemination and uptake of IPM in many countries.

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

Several state and private sector institutions, civil society and NGOs are involved in the pesticide life cycle management. Stakeholders and potential beneficiaries of the project were identified and consulted during PPG workshops held in Kribi, Douala, Yaoundé and Mbalmayo. The following will participate in, and benefit from, the project.

**MINEPDED:** is the lead executing partner for Components 1 and 2. As the Government agency responsible for the development and enforcement of regulations related to the management of hazardous waste including obsolete pesticides, MINEPDED will be responsible for the compliance monitoring of the safeguarding and disposal operations.

**MINADER:** is the lead executing partner in this project for Components 3 and 4. It will coordinate the implementation of all Component 3 and 4 activities, under the guidance of the Project Steering Committee.

**MINSANTE:** will participate in the project through membership of the PSC. The Ministry will be involved in the finalization of the revised pesticide legislation, and participate in the monitoring of impacts of pesticides and empty containers on human health.

**The Institute for Agricultural Research and Development (IRAD, Institut de Recherche Agricole pour le Développement):** plays an important role through agricultural research activities related to pesticide use. IRAD will participate in the project by supporting the design, roll out and evaluation of the alternative methods that will be piloted in Component 4.

**CropLife International (CLI):** CropLife have undertaken extensive work in safe-guarding and disposing of obsolete stocks in Cameroon.

**Trade Associations, Pesticides Distributors and Users:** Including CropLife Cameroon, the Cameroon Development Corporation, pesticide distributors/resellers, individual plantations and farmer organizations, and large-scale plantations and agro-industries, will be involved through knowledge sharing activities, testing of alternative practices to pesticides, and through capacity building activities.

**The Association of Honest African Women for Research and Development (AFAIRD, Association des Femmes Africaines Intègres pour la Recherche et le Développement):** Will collaborate with the project to ensure that women's needs and roles are addressed by the project, particularly in targeting the awareness raising on container management to women, who engage in and are affected by the practice, and in supporting the inclusion of women farmers in the alternatives profiling research and promotion activities.

**The Research and Education Centre for Development (CREPD):** will benefit from improved technical capacity in monitoring post-project activities, and will contribute to the project through sharing experiences in promoting alternatives to pesticides.

**The University of Ngaoundéré:** will contribute to the project through laboratory analysis in order to determine contaminants and degree of contamination in soils as well as determine quantity of pesticides residues in crops.

## **1.5 LESSONS LEARNED FROM PAST AND RELATED WORK, INCLUDING EVALUATIONS**

This project design has taken into account lessons learned from key regional projects including the Africa Stockpiles Program (ASP), notably the need for dedicated project staff, as opposed to relying entirely on already over-stretched national staff. Since national Government staff involvement is crucial for the sustainability of project results, the project proposes a different execution arrangement with a Project Management Team (PMT) staffed by government appointees (as government contribution to the project) led by a full-time National Technical Coordinator paid by the project. The National Technical Coordinator will be based at MINADER.

Lessons have also been learnt relating to the lack of sustainability of obsolete pesticide disposal projects based on the turn-key approach, involving the signing of a pesticide disposal contract with a specialized firm which then assumes full responsibility for organizing, planning and implementing security, transport, storage and safe disposal. FAO experiences across Africa have demonstrated that such projects are temporary fixes as new stocks continue to accumulate with national capacity and finance still lacking to deal with them. The closer involvement of government in inventory and developing removal strategies creates high-level understanding of the economic impact of pesticide mismanagement, and provides impetus and political commitment to activities on improving pesticide management throughout the lifecycle, as a preventative measure.

Regarding remediation of pesticide contaminated sites, FAO has developed methodologies that quickly and economically identify potentially high risk sites, assess the risks and identify options for reducing the risks. The methodology ensures that limited resources are employed to the maximum benefit of the country and human populations and the environment impacted by contaminated sites. Methodologies for risk reduction include land-farming, bio-remediation (using organic fertilizer) and phytoremediation (using local plants such as jatropha and vetiver). This relatively low-cost approach has been found to offer a viable alternative to sending contaminated soils for high temperature incineration in Europe, and will be undertaken to address contaminated sites in Cameroon.

## **1.6 LINKS TO NATIONAL DEVELOPMENT GOALS, STRATEGIES, PLANS, POLICY AND LEGISLATION, GEF AND FAO'S STRATEGIC OBJECTIVES**

Project activities are consistent with Cameroon's development objectives. The Country Programming Framework (CPF) 2013-2017 for Cameroon aims to support national development goals in developing the rural sector. The priority areas of the CPF are: strong and sustainable rural growth; increased agricultural employment opportunities and access to resources for rural youth and women; and increased resilience of rural households to natural disasters and crises.

This project is in direct alignment with the priority area 1 of the CPF, including Output 1.3.1 'Natural resources are managed sustainably.' Project components 1 and 2 and 3 will contribute to this output by removing and destroying obsolete pesticides, and strengthening the capacity to manage pesticides properly. Component 4, a study of the typology of farm holdings will be conducted in the two agro-ecological zones, which furnish the Government of Cameroon with agriculture data and contribute to improved plant protection techniques and use of improved varieties and cultivars (CPF Output 1.4.1).

The project is also consistent with the enforcement of the common regulation on the registration of pesticides in the CEMAC zone, and it is hoped the project will reignite regional efforts to ensure this common registration is effective.

### **a) Alignment to the Stockholm Convention National Implementation Plan**

Cameroon completed its NIP in December 2012. The NIP objective is to reduce by 2028, the sources of POPs in Cameroon in order to protect human health and the environment against the effects of those substances. The project will contribute to the implementation of the NIP through each of its components, but particularly by dealing with POPs sources (obsolete stocks, contaminated sites, and empty pesticide containers) under Components 1 and 2. By focusing on an improved legislative framework and the piloting and dissemination of alternatives, Components 3 and 4 will help to ensure that activities undertaken in Components 1 and 2 are sustainable.

### **b) Alignment with GEF focal area and/or LDCF/SCCF strategies**

The project contributes to the implementation of the GEF-5 Chemicals Strategy. It focuses on: CHEM-1, specifically: POPs waste prevented, managed, and disposed of; POPs contaminated sites managed in an environmentally sound manner; and country capacity built to effectively phase out and reduce releases of POPs. The project will dispose of up to 100 tonnes of existing obsolete and remediate 2 heavily contaminated priority sites.

The project addresses a number of SAICM Global Plan of Action priorities including helping Cameroon to implement the International Code of Conduct on Pesticide Management, which is the guiding reference for all the project activities on building capacity for regulation, including legislation, registration, post-registration surveillance and control, phasing out of HHP and promotion of alternatives.

### **c) Alignment with FAO Strategic Framework and Objectives**

The new FAO Strategic Framework is comprised of five Strategic Objectives (SOs) that represent the main areas of work of FAO. This project is linked to Strategic Objective 2 (SO-2), "Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner" particularly Organizational Outcome 2 under SO-2 "Stakeholders in member countries strengthen governance – the laws, policies and institutions that are needed to support producers in the transition to sustainable agricultural systems."



## **2 SECTION 2: PROJECT FRAMEWORK AND EXPECTED RESULTS**

### **2.1. PROJECT STRATEGY**

In designing the project, priority has been placed on what needs to be done urgently to address the current risks posed by the deteriorating existing obsolete stocks and heavily contaminated sites. The proposed project builds on the CropLife Clean Farms project which collected and stored 44.9 metric tonnes of obsolete pesticides at the Edea central store. The project design also calls upon proven design criteria established during the implementation of related projects in the region and is linked to the overall programme of support on pesticide issues to Africa by FAO under GEF Chemicals funding.

In addition to directly removing the CropLife safeguarded stockpiles and remediating the remaining sources of obsolete pesticide the design includes three complementary components to improve pesticide management in Cameroon, addressing the root causes of accumulation of these wastes and preventing future stockpiles.

The project is designed to be complementary to key national activities related to pesticides management. In particular, the revision of laws and regulations will be completed by strengthening institutional capacities to enforce the revised regulations. Linkages to regional initiatives and programmes linked to strengthening capacity for pesticide registration also features in the design.

Another aspect incorporated is the use of technologies that are relevant to the climatic and ecological conditions of Cameroon, in particular in the areas where the project will develop its activities. As such, the pilot activities on non-toxic alternatives will focus on affordable, low cost, readily available alternatives to chemical pesticides, aiming to demonstrate their efficacy and to ensure they are within reach of farmers.

### **2.2. PROJECT OBJECTIVES**

The project objective is to reduce POPs releases from obsolete pesticide stockpiles and contaminated sites and to strengthen the capacity for the sound management of pesticides. Specific objectives of each component are to: safely destroy POPs and obsolete pesticides and remediate pesticide-contaminated sites (Component 1); implement a system of management of empty pesticide containers, including rinsing by users, collection, storage, segregation and volume reduction, and recycling (Component 2); strengthen the regulatory framework and bolster the Government of Cameroon's institutional and technical capacity to ensure sound management of pesticides (Component 3); and to increase the successful uptake of alternatives to chemical pesticides on key crops (Component 4). These four components will be supported by horizontal project management and Monitoring and Evaluation / M&E (Component 5) and awareness/communication strategies which will inform project execution decisions and create the necessary conditions for beneficiary knowledge and participation in project activities.

### **2.3. PROJECT COMPONENTS**

The project has been structured into five components. This section describes the scope of the components in terms of specific activities, outputs and outcomes expected to be achieved.

#### **Component 1: Safe disposal of POPs and other obsolete pesticides, and remediation of contaminated sites**

This component will focus on the safe disposal of 44.9 tonnes of stockpiled POPs and other obsolete pesticides safeguarded at the main central storage compound at Edea as part of the CropLife Clean Farms programme in Cameroon plus 5 tonnes held at SODECOTON in Garoua. The safeguarding process highlighted that much of the originally estimated 330 tonnes of obsolete stocks identified in the 2009 / 2010 inventory were usable and had largely been sold and used during the interim period

2010 – 2013. It is the opinion of national stakeholders that new obsolete pesticides are likely to have accumulated in the period 2010 – 2014 and that these do not appear in the existing inventory. The project has been designed, therefore, to include an outreach and awareness programme in advance of the removal of the stocks at Edea based on past experience obtained during the CropLife safeguarding project. Based on this experience, and ongoing MINADER stock identification activities, it is anticipated that a further 45-50 tonnes of stockpiles will be added to the quantity of waste for export and disposal under this project, making a total of 100 tonnes. The hazardous stockpiles will be safeguarded (as needed), exported and disposed of in an environmentally sound manner by an international disposal company.

The inventory process in 2009 identified six priority pesticide-contaminated sites in the 5 regions of the country that were covered (out of the total 10), and additional sites have been flagged during CropLife CleanFarms project and ongoing MINADER inventory activities. The project will engage and train a national team to confirm priority sites for screening, generating field sampling data which will be used to develop site specific remediation plans. Remediation will pilot locally available, cost-effective techniques, ensuring it can be repeated on further identified sites by trained national staff, post-project. The implementation of this work will be supported by an international NGO, Blacksmith Institute (BI), who have worked with FAO on similar projects in other countries and regions. BI hold specific intellectual property which has been used to support the development of the FAO system for site evaluation and development of remediation plans.

**Outcome 1:** Existing POPs and obsolete pesticide stocks disposed of in an environmentally sound manner and POPs pesticide contaminated sites remediated.

**Output 1.1** Strategy for the disposal of up to 100 metric tons of obsolete pesticides and associated wastes developed.

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

- 1.1.1. Outreach campaign in cooperation with CropLife Clean Farms Cameroon to identify the newly accumulated stocks in the public and private sector and the validation of the inventory from the safeguarding activities completed in 2013. Updating of PSMS data based on reviews of stores completed as part of the safeguarding exercise;
- 1.1.2. Development and approval of an Environmental Assessment (EA) and Environmental Management Plan (EMP): A task team led by MINEPDED and supported by an international consultant will develop the EA and EMP based on guidance provided in the Environmental Management Toolkit (EMTK) volume 3. The validated inventory data in the Pesticide Stock Management System (PSMS) will be used to confirm aspects such as the preferred safeguarding strategy, the preferred disposal strategy, risks and associated mitigation measures and the overall relationship of the obsolete stocks and the storage locations with the wider environment. The EA and EMP will undergo disclosure and approval in line with national requirements.

**Timeline for implementation:** The EA and EMP will be developed, disclosed and approved in year 1 of project implementation.

**Output 1.2:** Disposal of approximately 100 tons of obsolete pesticides and associated wastes.

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

- 1.2.1. An international tender for safeguarding and disposal services will be developed by FAO in consultation with MINEPDED. The tender will be based on the details in the EA and EMP and updated PSMS data highlighted in Output 1.1. A contract will be awarded according to FAO procurement rules;
- 1.2.2. The selected company will implement the contract for safeguarding and disposal in Cameroon. The implementation of activities will be coordinated by MINEPDED with support from FAO (Lead Technical Officer and Lead Technical Unit LTO and LTU respectively). The

contractor will work with national stakeholders to plan the implementation of the activities to allow for export of all wastes from Cameroon in accordance with the Basel Convention by end of year 2 of the project;

- 1.2.3. The quality control monitoring of the implementation will be achieved through the monitoring of compliance with the tender specifications by the client (GoC) to ensure standards are met in practice. 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. FAO will support GoC to develop the necessary plan for monitoring of activities.

**Timeline for implementation:** All safeguarding and disposal activities will be completed in year 2.

Output 1.3: High-priority contaminated sites remediation pilots.

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

- 1.3.1. Establish and train a national team in the FAO Rapid Environmental Assessment (REA) protocol by FAO (LTU) and an international NGO partner Blacksmith Institute (BI). The teams will then complete assessments at all contaminated sites (up to twenty locations) and confirm the 6 priority sites previously identified from PSMS data; The REA will include the development of detailed site sampling plans for the 6 priority locations;
- 1.3.2. Detailed site investigation will be conducted at the 6 priority locations. The investigations will include intrusive sampling based on the sampling plans developed under 1.3.1. Based on the results of the investigations, site-specific Conceptual Site Models (CSM) will be developed for each location. The CSM will form the basis of a set of site specific remediation strategies which will include an analysis of alternative options for remediation;
- 1.3.3. Following review and approval by key stakeholders such as MINEPDED , implementation of site-specific remediation plans will be initiated at the two confirmed highest risk locations. The plans will act as pilot projects which can be used as test cases which can be adapted for remediation of the lower risk locations as a follow-up to the GEF supported intervention. The strategies will be implemented over a period of 18 – 24 months to allow for a critical assessment of the risk reduction achieved over the lifetime of the project.

**Timeline for implementation:** The REA, detailed site investigation and prioritization will be completed in year 1. The on-site remediation strategies will be developed and approved in year 2. The implementation of the remediation and risk reduction strategies will be completed in year three and four.

## **Component 2: Management of empty pesticide containers**

Component 2 aims to mitigate risks to public health and the environment generated by empty metal and plastic pesticide containers, which constitute a significant source of pesticide contamination through reuse for the storage of food and water. This component will assist Cameroon in the finalization of existing draft legislation and development of regulations linked to environmentally sound container management. The component will further develop a container management system at pilot level in the North and South West regions of Cameroon, two areas with high pesticide use intensity in the cotton and cocoa production sectors. As with other sustainable container management schemes around the world, the component will include a review of regulations to ensure that the roles and responsibilities of the pesticide suppliers, distributors and users are clearly defined including the responsibility for on-going funding and management of the scheme. The pilot projects will start with a pesticide user awareness campaign on the importance and technique of effective triple rinsing, and the steps to take if exposure occurs, in particular reporting incidents to health centres and taking the container to the doctor with the victim. The campaign will focus on vulnerable groups such as women and children who are often the ones using the containers for food and water storage in the home, and are thus more exposed to pesticide residues in old containers.

The project will seek to demonstrate the link between containers and pesticide poisoning and exposure incidents by monitoring reports via hospitals and health centers to the Poison Centre (hopefully demonstrating the utility of the increased information exchange to be established under Output 3.4) and through surveying farmers (for the Northern Zone where component 4 will also be rolled out).

The pilot will include a handover of the container management scheme to an appropriate partner to ensure sustainability. The achievements of the pilot scheme will then be extended nationally by means of an action plan to be developed and validated under the project.

**Outcome 2:** Risks to the environment and human health from empty pesticide containers reduced through establishing and enhancing container management systems at national level.

**Output 2.1:** Pilot management schemes of empty pesticide containers (collection, rinsing, transport, storage and recycling) developed.

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

- 2.1.1. Review of pesticide container management legislation and development of associated regulations with emphasis on the responsibility of the seller of the pesticide to have a scheme in place for take-back of containers sold on the open market;
- 2.1.2. Development of container management schemes based on a detailed stakeholder analysis and integration of existing schemes operating at a small scale. The schemes will be developed based on analysis of data by an international expert who will work with national experts. The PPG container management report will act as the basis for the development of the schemes.

**Time line for implementation:** The update of legislation and development of associated regulations will be completed in year 1 allowing for adoption and approval by end of year 4. The development of the schemes will start in year 1 with and aim for endorsement early in year 3.

**Output 2.2:** Implementation of pilot projects on management of empty pesticide containers in North and South-West Cameroon.

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

- 2.2.1. Development of an awareness and outreach strategy targeting all stakeholders at key points in the container management cycle. The strategy will cover pesticide suppliers, government inspectors, pesticide users and vulnerable groups including women and children. The strategy will include an element linked to the particular impacts of pesticide exposure on immune suppressed and undernourished individuals.
- 2.2.2. Conduct farmer training and awareness programme on participation in the pilot projects in the North and South West Cameroon. As with all container management schemes, 99% of the actual risk reduction is achieved by immediate and effective triple rinsing and puncturing of containers by the users, with collection and further treatment providing relatively less risk reduction than this first step. In addition, properly cleaning containers so they are no longer hazardous is essential to ensure that the transport of these wastes is in line with the new national legislation and permits to be developed under Output 2.1 (described above). Hence the communication, training and awareness of farmers both to participate in the pilot but also to effectively triple rinse their containers is essential;
- 2.2.3. Establish and operate pilot schemes in the two selected zones. Establishing recycling facilities may require Environmental Impact Assessment and/or environmental or other permits for operation of the new waste management facilities. Once established, personnel operating the systems will need to be trained.
- 2.2.4. Once the pilot schemes are operational, the systems will be operated by the trained national teams. To make the process sustainable it is proposed that the scheme is operated in

collaboration with the pesticide supply industry as an extension of existing activities implemented by CropLife Cameroon.

**Time line for implementation:** The awareness programme will be operational by end of year 1 allowing outreach to stakeholders in year 2. The facilities to be established as part of the pilot schemes will be developed, licensed and operational in year 3 allowing for 18 months operations of the schemes by the end of year 4.

#### Output 2.3: National empty pesticide container management strategy developed

The implementation of this Output is contingent on the drafting of the new legislation and regulations under Output 2.1 and the processing of results and feedback from the pilot schemes developed and implemented in Output 2.2.

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

- 2.3.1. Based on the structure, roles and responsibilities to be newly defined in the updated legislation and regulations covering pesticide containers developed under Output 2.1 there will be a need to provide support to the institutions responsible for enforcement of the new rules. FAO training will be provided to the identified government stakeholders on tracking the sale and distribution of pesticide containers and the implementation by pesticide distributors of the new regulations on development of a take-back mechanism. Government personnel will also be trained in the processes for ensuring containers are adequately cleaned at the point of use by farmers allowing for the knowledge to be passed on within the local communities as part of the pilot projects developed under Output 2.2.
- 2.3.2. A draft national container management strategy will be based on detailed stakeholder analysis and feedback from the implementation of the pilot schemes implemented under Output 2.2;
- 2.3.3. The draft will be presented to a stakeholder workshop to agree a final strategy and action plan for endorsement and subsequent implementation by GoC.

**Time line for implementation:** Training of government personnel on enforcement of regulations will be completed in year 2. The national strategy will be developed based on the findings of the pilot schemes. The process will start in year 3 and end with a national stakeholder workshop to endorse the national strategy in year 4.

### **Component 3: Strengthening institutional and regulatory framework for pesticide management**

Component 3 will focus on strengthening the capacities of key institutions in the enforcement of pesticide regulations, addressing inefficiencies in the quality control and inspection system and improving coordination between the various actors involved in pesticide management. As discussed in Section 1, Cameroonian law on pesticide regulation are dispersed among many instruments, with a complex assignment of responsibility to different institutions that both overlap and contain gaps.

Outcome 3: Regulatory framework and institutional capacity strengthened for sound management of pesticides throughout their lifecycle

The project will address key weaknesses identified at different life cycle stages, including registration, import, and post-registration including inspection and quality control. The component activities will build horizontal capacity for effective management at all stages including effective coordination through a functional Conseil National Phytosaintaire, which will demonstrate its value including by providing a government oversight and coordination of the project activities under this component, in order to ensure adequate and sustainable resources from the government for the future. The development of new legislation and supporting texts will provide clarity and the necessary sound legal basis; and the exchange of information on pesticide management will increase the evidence

base for sound management of pesticides. Thus the activities will be closely linked and support each other.

**Output 3.1** Pesticide management legislation and registration system revised and improved in conformity with the Code

While a number of Decrees and Regulations exist, they are associated with the 2003 law on phytosanitary protection or the 1996 law on Environmental Protection. The Code recommends that a law be developed on Pesticide Management with its own regulations, in order to avoid the (actual) situation of complex, overlapping and incomplete responsibility between different actors. At the same time, Cameroon is technically bound by the CEMAC regional Regulation, which is however not active. To help the region consider how to move forward on activating that regulation, the project will generate and share insights on the regional regulatory system from the national perspective, and how it has been taken into account in a national legal review.

3.1.1 Update of the 2012 legal assessment and identification of needs for new legal texts

3.1.2 National workshop to confirm needs and agree on legal review process and texts

3.1.3 Drafting of law on pesticide management, and regulations and provisions for implementation.

3.1.4 Validation workshop to consult stakeholders, endorse texts, and discuss perspectives and prospects for the regional regulatory environment

3.1.5 Production of a paper on the application of the CEMAC regional regulation from a national perspective

**Timeline:** The update and national workshop will be completed in Year 1 and new texts drafted in Y2. The workshop and submission of texts will be in Y3

**Output 3.2:** National Phytosanitary Council operational and coordinates pesticide life cycle management and control

The National Phytosanitary Council (NPC) was established in 2005 but has never been operational – it has not met to date, although various actions for pesticide management are undertaken by various government departments, particularly customs. The proposed composition of the council does not include the Agence des Normes et de Qualité (ANOR) or customs, so the membership will be reviewed in the project. The Stockholm NIP includes the activation of this Council under the lead responsibility of MINADER. A national coordinating mechanism for pesticide management would coordinate activities between different actors, improve post-registration monitoring, and contribute to the mainstreaming of pesticide management in wider government policies (e.g. rural development, poverty reduction, occupational and consumer health).

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

3.2.1 Establish an operational level group representing all the ministries to prepare a policy brief outlining the legal basis for the Council, review membership and ToR, an initial baseline of relevant activities and needs for pesticide management, and a proposal for the decisions or actions to be taken by the Council at its first meeting

3.2.2 Regular meetings (check periodicity according to the decree), training and support as needed to NPC in developing workplan, accessing finance, coordinating activities and reporting on achievements.

**Timeline for implementation:** The operational level group will prepare the NPC meeting in Y1; the first NPC meeting and training on new materials in support of post registration activities will take place in Y2 to implement their action plan Y3 and Y4.

### Output 3.3: Increased national capacity for pesticide inspections and post-registration control

Inspection services will be reinforced and equipped to carry out their function. Currently an estimated 100 agents from MINADER and other ministries including MINEPDED and MINCOMMERCE conduct inspections; however many of these are not officially sworn in, limiting their mandate to inspect. The project will clarify the mandates and increase the number of official inspectors, and train them, along with customs inspectors, on the draft FAO Manual on Pesticide Inspection, which will be adapted to the Cameroon situation including new legislative and regulatory framework. In addition to training, the project will seek to demonstrate the value of a functional inspection service, identifying necessary logistical and operational support for inspectors, and advocating through other project activities, particularly the National Phytosanitary Council, to build political and financial commitments to the ongoing functioning of these activities.

**Main activities:** The key activities to be implemented under Output are:

- 3.3.1 Assessment of on the ground capacity for pesticide inspection & revision and update of mandates of inspectors
- 3.3.2 Development of the training plan and material, including PSMS, for the inspection and control of pesticides, and training of staff on inspection and control of pesticides
- 3.3.3 Logistical, technical, or additional resource support to facilitate and monitor inspections
- 3.3.4 Information dissemination on inspection and enforcement regime to regulated organisations and the public

**Timeline for implementation:** The inspectors mandate will be addressed in Y1. Training plan and material will be developed & delivered in Y2, with support for inspections through Y3 and Y4

### Output 3.4: Information accessible and exchanged on pesticide registration, imports and health impacts

The lack of data availability and exchange on pesticide quantities, use and impacts prevents an evidence based approach to regulation, and limits the extent of political and financial mainstreaming of pesticide risk management. This output will start to address this gap, by identifying and establishing information compilation and sharing between stakeholders on registration status and actual imported quantities and pesticide poisoning cases recorded in health and hospital centres; and supporting the CNP (Output 3.2) in developing evidence based approaches.

**Main activities:** The key activities to be implemented under this Output are:

- 3.4.1 Information audit and needs analysis: i) assessment of information held (e.g. registration decisions, import quantities, poisoning cases) by various stakeholders involved in pesticide life cycle management and ii) identification of opportunities and mechanisms for information exchange.
- 3.4.2 Information exchange system and procedures proposed and agreed by all relevant stakeholders, possibly including regular meetings, publications, PSMS, websites or other public databases, or proposals for new cooperation or initiatives
- 3.4.3 Roll-out and monitoring of information exchange according to agreed system.

**Time line for implementation:** The output will be delivered in time with annual project meetings where many of the structures are represented anyway. The system/procedures will be proposed by Year 1, with meetings held and roll-out of agreed mechanism in Years 2, 3 and 4.

Output 3.5 National laboratory technical staff capacity increased and sustainable operational plan developed

MINADER have made an important investment in the National Laboratory for the Analysis of Agricultural Products and Inputs, including updating the analytical equipment with a recent purchase of a GC-MS and associated staff training. For pesticide qualitative and quantitative analysis the lab has the new GC-MS, as well as a Spectrophotometer; and for other analyses an Atomic Absorption Spectrophotometer (AAS) and Kjeldahl apparatus; however there is a lack of resources for ongoing maintenance, replacement and training, as is common in the region, and the laboratory is not accredited. The project will provide a schedule of refresher and consolidation training, and develop a long term strategy or Business Plan for ensuring the sustainable operation of the laboratory; this will include aspects such as financing options, maintenance and replacement of equipment, accreditation, and staff capacity development and retention.

**Main activities:** The key activities to be implemented under this Output are:

3.5.1 Evaluation of the functioning, needs, and operation of the laboratory, including training and accreditation needs assessment, and business/management plan proposed for sustainable financing and operation

3.5.2 Capacity building and training of technical staff to consolidate and update skills, including ensuring that the necessary consumables are available to fully utilise existing equipment

**Time line for implementation:** The training will take place in years 2 and 4 of the project; and the sustainability assessment and proposal will be completed by Year 3 in order to allow the project to support any identified actions in the last year as appropriate.

Output 3.6 National capacity increased to implement registration in line with the Code of Conduct

A national pesticide registration committee established by Decree 92/223/PM in 1992 (Commission nationale d'Homologation des Produits Phytosanitaires et de Certification des Appareils de Traitement), is functional and meets regularly to register pesticides and equipment. However registration decisions are made primarily based on registration dossiers submitted by applicants with limited field testing of efficacy, and there is limited national capacity and ability to perform more technical assessments such as equivalence testing, setting Maximum Residue Limits, or the consideration of national data on health and environmental assessments.

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

3.6.1 Staff training will be provided on all aspects of registration as set out in the Code of Conduct on Pesticide Management.

3.6.2 One member of government staff will be supported to attend the University of Cape Town distance learning Diploma of Pesticide Risk Management.

**Time line for implementation:** The in-country training will take place in Yrs 2-3 to allow for other pesticide management information to be gathered and available; participation in the UCT course will be for one student in Year 2

**Component 4: Promotion of alternatives to conventional pesticides and communication strategy**

The project will adopt an innovative profiling of farming systems among representative networks of cotton farmers in the Soudano-Sahelian agro-ecological zone, and horticultural producers in the forest zone. The profiling will enable selection and field trialing of key priority alternatives to POPs, obsolete pesticides, and HHP. The most successful alternatives will be promoted through extension services and other communication channels to stakeholders.

Outcome 4 IPM alternatives to conventional pesticides successfully promoted and the use of chemical pesticides, POPs and highly hazardous pesticides reduced.



This component aims to reduce the use of conventional chemical pesticides through the promotion of low risk alternatives to hazardous pesticides. The component will build an evidence base for alternatives by collecting robust data on actual practices in order to guide the work on alternatives, as well as encourage innovative peer to peer promotion of IPM for adoption. Various stakeholders, including IRAD, PNVRA and other labs have ongoing research programmes on alternatives such as tolerant varieties and biopesticides, and any of these that are relevant for the crops and needs of the profiled farmers will be further tested in field conditions and promoted.

Cotton has been identified as the target crop, reflecting the Government priority expressed in the Document de Stratégie du Développement du Secteur Rural, the high use of pesticides in the cotton sector (35% of total pesticide imports, according to Croplife Cameroon, 2007) and particularly the POPs lindane and endosulfan and other HHP, and the regional experience of applying both the profiling methodology and IPM/FFS methods on cotton. The second region in the Forest Zone will continue a previous FAO TCP project which established farmer networks and trained over 200 farmers in IPM production methods for maize.

Because communication is vital for the successful promotion of IPM, a communication strategy will be developed under this component. The communication strategy will also serve the implementation of all other project components, particularly the container management component 2 on container management which will be piloted in the North zone; and the profiling surveys may also include exposure and poisoning data, to compare and complement Ministry of Health statistics in monitoring the ultimate impact of the container management schemes (see Component 2).

#### Output 4.1 Potential alternatives to POPs and other hazardous pesticides identified

Robust research into farmer production and practices using the FAO's innovative profiling methods will identify any alternative practices or products already used by producers, who will include beneficiaries of previous IPM training by SODECOTON in the North; as well as phytosanitary and pest management conditions and needs of farmers. This data will be the basis for selecting alternative products and practices (prioritizing agro-ecosystem approaches where possible) that are the most relevant either in terms of acceptability (e.g. practices already in use by the network members) or pest management potential (e.g. international or research center methods that are relevant to the phytosanitary and pest management needs of farmers). The North and Forest zones represent areas with high use of toxic products (in cotton and tomato crops especially), as well as previous experience of IPM initiatives (by SODECOTON in the North and the FAO TCP project in the Forest), and some baseline farmer networking efforts that will form the basis of the network building.

**Main activities:** The key activities to be implemented under this Output are:

- 4.1.1. Establishment of a farmer network and collection and analysis of data on pest control practices and needs (including exchange visits with other countries using the methodology such as Benin)
- 4.1.2. Identification of potential pest management practices and Plant Protection Products (PPPs) as alternatives control methods to POPs and other hazardous chemical pesticides (sources of alternatives will include existing farmer practices and national and regional research);
- 4.1.3. Stakeholder's workshop to agree on the identified potential alternatives and the strategy for field testing, registration and promotion.

**Timeline for implementation:** Field data collection using the farmer network and data entry and analysis in the Pest control monitoring and management system will be completed in Y1 and the alternatives selected and confirmed by stakeholders by the first half of Y2. Data collection on the farmer practices will continue throughout the four years to allow the impact of the experimentation on alternatives to be monitored.

Output 4.2 Identified alternatives to POPs and other hazardous pesticides tested for their technical and economic feasibility at farm level.

**Main activities:** The key activities to be implemented under this Output are:

- 4.2.1. Develop in cooperation with Institute for Agricultural Research and Development (IRAD) to conduct efficacy trials of identified alternatives (including protocols, actors, sites, equipment, specialized staff, inputs)
- 4.2.2. Establishment of experimentation plots for the selected alternatives among and with the network of farmers to confirm their economic and technical feasibility;
- 4.2.3. Evaluation of value chain (import, local manufacturing, registration, distribution, extension, availability to farmers) of alternative practices and/or Plant Production Products (PPPs) in order to make them available to farmers

**Timeline for implementation:** field experiments should be conducted in Y2 and 3 of the project implementation and assessment of value chain

Output 4.3 Viable alternatives to POPs and other hazardous pesticides are promoted

The project will draw on previous IPM and extension service support projects to widely promote the proven alternatives, encouraging and monitoring adoption of the alternatives by farmers in the project area and beyond. Promotion to farmers will link to existing services in charge of raising environmental awareness at regional and central levels including mass media channels for the wider population on the risks of pesticides and the benefits of alternatives. Evidence from both the hazards of using POPs/ HHPs, as well as the viability of using biopesticides or IPM practices, will be shared with the registration output (3.6) to deregister problematic products, or register the viable alternatives proven through the field trials.

**Main activities:**

- 4.3.1. Preparation of training modules and conduct training sessions of extension agents and farm advisers on the viability and technical methods of proven alternatives;
- 4.3.2. Preparation and implementation of promotion strategy on the proven alternatives, possibly including public materials, journalist training, and building a network of contacts within the pesticide distribution chain.

**Timeline for implementation:** the training curricula will be produced in parallel with the establishment and operation of the experimental plots in Y2 and 3. Training for extension agents and advisors will start in Y3 and continue in Y4, along with the promotion strategy.

## **Component 5: Monitoring and Evaluation (M&E)**

The objective of component 5 is to ensure results-based monitoring and evaluation of project progress towards achieving project outputs and outcome targets as established in the Project Results Framework.

Based on the indicators in the results framework (appendix 1) and the milestones set in the work plan a bespoke M&E plan will be developed for the project. FAO will provide training to the Technical Project Coordinator on how to use the FAO M&E tracking system. The system uses a series of simple milestones from the work plan to estimate the percentage delivery by Output and Component. A dash-board system is used to illustrate progress which is reported on a monthly basis. In addition, independent evaluations will be organized by FAO in line with the GEF M&E policy.

**Main activities:**

- 5.2.1. The Technical Project Coordinator will provide monthly reports on progress in achieving project outputs and outcomes using the bespoke system for project tracking linked to the log frame and work plan;
- 5.2.2. Independent mid-term and final evaluations will be organized by FAO in consultation with the project partners and the PSC.

**Time for implementation:** M&E 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.

### **Project Management**

Experience has shown that a lack of adequate project management capacity is the principal cause for projects to not achieve their desired impact. It is therefore proposed that this risk is mitigated by ensuring adequate personnel resources and training support is provided through the project in this area. Responsibility for project management will rest with a National Technical Coordinator, who will be hired under the project and hosted at MINADER. A National Project Coordinator from MINEPDED will head the Project Management Team (PMT). The coordinator will consolidate the planning of activities and tasks under all Components. The project coordinator will be responsible for submission of the consolidated plan and associated documentation to FAO and Project Steering Committee (PSC) for approval.

#### **Main activities:**

- The National Project Coordinator as head of the PMT will be responsible for overseeing the development of an Output based work plan in a format to be provided by FAO. The National Technical Coordinator will prepare the plan for clearance by the National Project Coordinator and submission to FAO. The plan will be used to identify a series of milestones and deliverables which will be used in the project M&E system (Section 5.2.1);
- The National Project Coordinator will also be responsible for the supervision of implementation of annual work plans to ensure milestones and targets set at the inception phase and approved by the Project Steering Committee are met. Any adjustments to the new plan will be submitted to the PSC and FAO for approval before the work plan is implemented.

**Time for implementation:** the initial detailed work plan will be developed during the project inception phase based on the provisional work plan included in this project document and training provided by FAO. A critical path analysis for each project component will be developed at the level of task (Component – Output – Main Activity – Activity – Task). The plan will include a forecast for project delivery. Thereafter the work plan will be updated based on the review of implementation (5.1.2) and submitted to the PSC and FAO Lead Technical Officer (LTO) every 6 months for review and approval.

### **2.4. GLOBAL ENVIRONMENTAL BENEFITS**

The project will deliver significant and immediate global environmental benefits through the safe disposal of approximately 100 tons of POPs and other obsolete pesticides, and through the remediation of at least two heavily polluted sites. The disposal of POPs and clean up of contamination sources will reduce releases of hazardous products into the receiving environmental media – air, land and water.

Through improving container management and raising awareness among farming communities and 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 of the release of pesticides to the environment, mitigating the risk of surface water contamination and soil degradation.

Improving pesticide regulations and enhancing capacity to implement them will contribute to better control and management of pesticides, prevent future accumulation of obsolete stocks and release of highly hazardous pesticides into the receiving environment.

## **2.5. COST EFFECTIVENESS**

The project will use local, low-cost, low-technology soil decontamination technologies for contaminated sites, therefore avoiding the need for export of contaminated soils. The disposal element will benefit from FAO's unique experience in disposing of obsolete pesticides around the world. This experience has demonstrated that the use of specialist companies to export and destroy the pesticides at dedicated hazardous waste treatment facilities is the most cost-effective environmentally sound management strategy.

For Component 2, the project will implement pilot projects on management of empty pesticide containers in North and South-West Cameroon. The pilot schemes will be operated by trained national teams. To ensure cost-effectiveness the scheme will be operated in collaboration with the pesticide supply industry as an extension of existing activities implemented by CropLife Cameroon. Components 2 and 4 both have pilot activities in the North zone, and the project will maximise coordination of resources including farmer networks under Component 4, and the awareness campaign for Component 2.

## **2.6. INNOVATIVENESS**

Activities under Component 3 will be consistent with the enforcement of the common regulation on the registration of pesticides in the CEMAC zone. It is understood that this project represents the first national level action of CEMAC countries to meet these agreed obligations. It is hoped the project will reignite regional efforts to ensure this common registration is effective. The project aims to contribute to this by inviting CEMAC representatives to project workshops and producing a lessons learned paper on meeting CEMAC requirements at national level.

Component 4 will build an evidence base for alternatives by collecting robust data on actual practices. An innovative model of peer-to-peer promotion of IPM will be used in order to encourage early adoption. Cotton has been identified as the target crop, reflecting the Cameroon Government priority to address pesticide use, specifically lindane and endosulfan in the sector. The project will draw on regional experience of applying both the Typology methodology and IPM/FFS methods on cotton. An innovative typology of farming systems to identify a representative network of cotton farmers to inventory pest control practices will be employed in the Soudano-Sahelian agro-ecological zone. Identified alternatives will then be tested for their technical and economic feasibility at farm level.

### 3. SECTION 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 the following:

- 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 when they have been utilized. 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 preparation of the project. Mitigation measures are proposed, and where appropriate, mitigation measures for high risks, will be further elaborated in the EMP.

Description of risk	Ranking	Mitigation measures	Responsibility
Institutional arrangements pose challenges related to execution of the project	Low	The project was prepared in a participatory manner by the relevant ministerial departments. However, Cameroon has some history of difficulty in inter-ministerial collaboration. The project execution activities have therefore been carefully allocated between MINEPDED and MINADER and a fully functioning and active PSC will be necessary to guide the project.	PSC
Potential for political instability	Low	There is currently no apparent sign of political unrest. Still, the risk needs to be monitored by the lead ministries throughout implementation and reported to the FAO and the PSC in case it becomes significant.	MINEPDED, MINADER
Environmental contamination from leakage of POPs and other obsolete pesticides due to poor conditions of containers.	Medium	Management measures to be included in the EMP include field procedures to ensure no further leakage occurs during the project activities. Chemical stores will be ranked according to leakage risk at the beginning of the project, and will be safe-guarded as a matter of priority.	MINEPDED

Insufficient national ownership of revised pesticide legislative framework.	Low	National stakeholders were consulted during the PPG and other preparatory activities. Continued sensitization will be conducted during project execution including national training sessions with key staff.	PSC
Monitoring staff being exposed to pesticides during collection and repacking of empty containers.	Low to medium	Training in safety, monitoring and handling procedures will be provided to all national monitoring staff. Personal Protection Equipment (PPE) provided for all personnel involved in safeguarding.	MINEPDED, FAO
Insufficient funds for safeguarding of major contaminated sites, the disposal of POPs and other project activities	Medium	The PPG has carefully reviewed all obsolete stock and contaminated sites data, and revised the inventory estimates. The project will respond to any changes to the existing inventory to ensure that: priority sites are repackaged; pesticides disposed of; and contaminated sites remediated.	PSC, FAO
Insufficient national capacity in undertaking evaluation and decontamination of pesticide contaminated sites	Medium	Capable institution(s) will be contracted to carry out decontamination operations working together with a national team in order to impart expertise on <i>in situ</i> soil remediation.	FAO, PSC
Climate risks such as floods, crop calendars disruption or increase of pest invasions	Medium	Emergency sites will be primarily safeguarded during the driest months with a view to reducing risks associated with torrential rainfall. Contingency plans, especially targeting removal of excess water accumulated in the holding areas, as well as an assessment of flood risk, will be included in the EMP and implemented in the event of torrential rains.	MINEPDED, FAO
Low existing use and uptake of alternative technologies by producers.	Low	A large-scale information and awareness-raising campaign about the modes of application and effectiveness of the proposed alternatives will be undertaken to help promote uptake of alternatives.  The promotion of IPM through FFS has been quite successful in previous related initiatives and, together with assistance from local NGOs, will be employed as part of this project to raise awareness on alternatives.	MINADER
Poisonings among the agents involved in the collection and re-grouping of un-rinsed empty pesticide containers.	Medium	Training modules revolving on technologies for the safe collection and re-grouping of these wastes will be specifically designed for the pilot project agents, and all agents trained prior to the piloting of collection activities.	MINEPDED

Pesticide companies/ distributors and farmers do not support the project.	Low	The project has involved and will continue to involve the private sector and producers associations in all the processes related to the project implementation.	PSC
Customs noncompliance in the implementation of the pesticides control system at entry points.	Low	Awareness-raising/ Obtaining the formal commitment of the Ministry of Finance (Customs). Customs' involvement into the development of the new control system.	PSC, MINADER lead

## **4. SECTION 4: IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS**

### **4.1. INSTITUTIONAL ARRANGEMENTS**

The institutional and implementation arrangements for this project are based on the mandates and experience of key institutions involved in the management of pesticides in Cameroon. The institutions include those whose respective mandates and responsibilities are outlined in sections 1.1 and 1.4. Execution of components will be the responsibility of MINEPDED and MINADER and build on both ministries' comparative advantages. Day-to-day support to the execution of activities under Components 1 and 2 will be the responsibility of MINEPDED and execution of activities under Components 3 and 4 will be the responsibility of MINADER. Each Ministry will appoint a national focal point who will work as part of the Project Management Team under the coordination of a national project coordinator based in MINEPDED. The national focal points will remain government employees and the cost of their support to the project will count as project co-finance from each Ministry. The national focal point will liaise with the Ministry personnel necessary to support implementation of each Component to ensure the necessary linkages to national policies and on-going initiatives are established. The aim is to ensure that project results are endorsed at Ministerial level resulting in the mainstreaming of the project into the overall plans of the Ministries.

FAO Cameroon as Budget Holder will be responsible for the financial management of the project. All procurement of goods and services (national and international consultants, equipment, waste management contracts etc.) will be managed by FAO Cameroon. All payment for in-country and international travel will be made to the traveller according to FAO rules. National and international travel budgets are detailed in the project budget. For national travel personnel will be expected to complete a national travel request so allowing the FAO office to raise the necessary travel authorisation and payment of allowances. Similarly, all costs associated with the management of the project (telephone, internet etc.) will be reimbursed following submission of the bill to FAO by the national project coordinator.

### **4.2. IMPLEMENTATION ARRANGEMENTS**

Based on experience from other projects a number of national implementation structures will be needed.

To allow for the involvement of other key ministries in the management of the project, a Project Steering Committee (PSC) will be established to support the project by monitoring the quality and timeliness of the execution of project activities and delivery of outputs, and propose adjustments as necessary. The PSC is a multi-stakeholder forum comprising representatives from not only line Ministries but also representatives from Crop Life International, national NGOs and other interested and affected parties as defined during the project inception phase. The PSC will normally meet on an annual basis, with extraordinary meetings called by the Chair as necessary, and be chaired by the Minister of Environment or his representative.

The **PSC** will guide and oversee implementation of the project, through the:

- a) Provision of guidance to ensure that project implementation is in accordance with the project document;
- b) Review and approval of any proposed project revisions – including the results framework and implementation arrangements;
- c) Review, amendment (if appropriate) and endorsement of all Annual Work Plans and Budgets;
- d) Review of project progress and achievement of planned results as presented in six-monthly Project Progress Reports, (annual) Project Implementation Reviews (PIRs) and Financial Reports;
- e) Provision of advice on issues and problems arising from project implementation, submitted for consideration by the PMT (Project Management Team) or by various stakeholders; and
- f) Facilitation of cooperation between all project partners and collaboration between the Project and other relevant programmes, projects and initiatives in Cameroon and the CEMAC region.



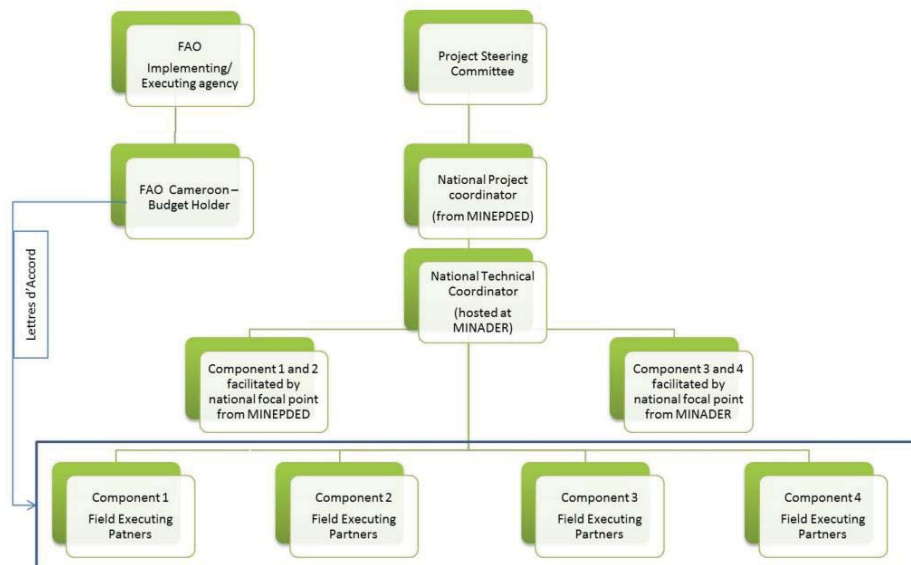
The **Project Management Team (PMT)** will be a virtual structure, comprised of the National Project Coordinator, National Technical Coordinator, and National Focal Points from MINADER & MINEPDED. Members of the PMT will remain based in their respective Ministries and organisations. Weekly meetings will be convened by the national project coordinator as head of the PMT where members will provide updates on implementation and execution and raise any issues which need to be brought to the PSC or FAO Cameroon for resolution. The weekly meetings will be minuted and sent to FAO Cameroon for recording. Membership of the PMT will be based on defined roles set in MINEPDED and MINADER and the participation of government personnel will be an in-kind contribution from Government of Cameroon. MINEPDED and MINADER will provide 3 CVs for the proposed national focal points who will be appointed to the PMT. The National Technical Coordinator will be recruited as a full time consultant by competitive selection by FAO Cameroon in consultation with MINEPDED and MINADER. The members of the PMT will be responsible for the day-to-day management of the project and timely and efficient implementation of the approved annual work plans. In close consultation with other partners involved in the execution of project components, the PSC and FAO, the National Technical Coordinator will:

- a) Act as secretariat to the PSC;
- b) Organize project meetings, workshops, and trainings as required;
- c) Prepare Annual Work Plans and detailed Budgets (AWP/B) by outputs and submit these for approval by FAO and the PSC;
- d) Coordinate and monitor the implementation of the approved AWP/B;
- e) 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.
- f) Ensure that all co-financing partners provide information on co-financing disbursed during the course of the year for inclusion in the PIR;

Together with the National Technical Coordinator, the National Focal Points and National Project Coordinator will:

- a) During project inception period, review the project's M&E plan and propose refinements, as necessary, and implement the plan;
- b) Coordinate the project with other related on-going activities and ensure a high degree of inter-institutional collaboration; and
- c) Assist in the organization of midterm and final evaluations.

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



**Figure 2: Organigram for project implementation**

**FAO’s Role:**

FAO will be the GEF Implementing Agency (IA) for the project. As the GEF IA, FAO will maintain project oversight 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 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 and carry out supervision missions.

As the GEF IA for the project, FAO will also:

- Manage and disburse funds from GEF in accordance with the rules and procedures of FAO;
- 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; and
- 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.

FAO will also be responsible for the financial execution of the project. As indicated in the introduction to this section this means that FAO will be responsible for the procurement of goods and services for the project in consultation with project partners based on the annual work plans and PSC-approved budgets.

The **FAO Representative in Cameroon** will be the **Budget Holder** (BH) responsible for the timely operational, administrative and financial management of the project. She/he, working closely with the PMT, 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;
- c) Preparation of annual/six-monthly budget revisions, as required, for submission to the LTO/LTU and the GEF Coordination Unit for technical review and clearance respectively;

- d) Preparation of six-monthly financial reports to be submitted to the GEF Unit and shared with the executing partners and the PSC;
- e) Represent FAO in the PSC.

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

**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 Officer (LTO) and Lead Technical Unit (LTU):** The Pesticide Risk Reduction Group (AGPMC) in the Plant Production and Protection Division (AGP) of the Agriculture and Consumer Protection Department will be the FAO LTU for this project. The LTU will support an LTO to be appointed from the FAO Regional Office for Africa (RAF)<sup>1</sup>, in providing technical advice and backstopping in consultation with other teams in AGP and FAO. The LTO, supported by and in consultation with the LTU, will:

- a) Review and provide clearance to TORs for consultancies, LOAs and contracts,;
- 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 PSC;
- f) The LTO will prepare the annual 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) With the LTU, field annual (or as needed) technical support and backstopping missions. The officer to complete the missions will be assessed based on the technical area to be reviewed;
- h) 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) 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 FAO** based in the Investment Centre Division (TCI) will review and approve project progress reports, annual 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 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.

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<sup>1</sup> To be designated from FAO regional/sub-regional office or AGP in Headquarters.

**The FAO Finance Division** will 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.

### 4.3. FINANCIAL PLANNING AND MANAGEMENT

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

Component	USD	Output	MINADER		MINEPDED		University of Ngaoundere		AFAIRD		CREPD		Croplife		FAO		Total co-financing		% co-financing		Total GEF		% GEF		Grand Total	
			in-kind		in-kind		In-kind		In-kind		In-kind		In-kind		In-kind		In-kind									
1	1.1	Obsolete pesticide strategy	42,012										150,000				192,012	74.1%	67,000	25.9%	259,012					
	1.2	Disposal	49,200					25,000				1,019,843					1,094,043	72.4%	417,500	27.6%	1,511,543					
	1.3	Contaminated sites					1,000,000				200,000						1,200,000	85.3%	206,500	14.7%	1,406,500					
2	2.1	Design CMS		480,000													480,000	93.9%	31,000	6.1%	511,000					
	2.2	Pilot CMS	120,000					50,000			350,000						520,000	78.0%	147,000	22.0%	667,000					
	2.3	National CMS strategy														0	0.0%	22,000	100.0%	22,000						
3	3.1	Legislation														0	0.0%	60,750	100.0%	60,750						
	3.2	National Phytosanitary Council														0	0.0%	13,228	100.0%	13,228						
	3.3	Inspection capacity										100,000					100,000	61.2%	63,500	38.8%	163,500					
	3.4	Information exchange						75,000			250,000						425,000	91.0%	42,250	9.0%	467,250					
	3.5	Capacity for laboratories and Q/C	1,420,000														1,420,000	97.9%	29,800	2.1%	1,449,800					
4	3.6	Registration capacity	2,400,000										100,000				2,500,000	99.5%	11,500	0.5%	2,511,500					
	4.1	Alternatives identified															150,000	49.7%	152,000	50.3%	302,000					
	4.2	Alternatives tested	100,000					325,000									425,000	81.3%	97,500	18.7%	522,500					
	4.3	Alternatives promoted through FFS									200,000						260,000	78.8%	70,000	21.2%	330,000					
5	5.1	Project Management										251,319			170,000		421,319	71.7%	166,472	28.3%	587,791					
	5.2	M&E	120,000														120,000	51.7%	112,000	48.3%	232,000					
	<b>Grand Total</b>		<b>4,311,212</b>	<b>480,000</b>	<b>1,325,000</b>	<b>300,000</b>	<b>1,000,000</b>	<b>1,721,162</b>	<b>170,000</b>	<b>9,307,374</b>	<b>84.5%</b>	<b>1,710,000</b>	<b>15.5%</b>	<b>11,017,374</b>												

#### **4.3.2. GEF inputs**

The largest proportion of GEF funds (USD 691,000) are allocated to the safe disposal of POPs and highly hazardous pesticides and the remediation of contaminated sites (Component 1). To support the sustainability of the project's key results and prevent future accumulation of POPs and obsolete pesticides, GEF funds are also allocated to support development of a sustainable container management strategy (USD 200,000) under Component 2; building the capacity for enforcement of pesticide regulations (USD 221,028) under Component 3; and promoting less toxic alternatives (USD 319,500) under Component 4. GEF resources are also allocated to support project management (USD 170,000) and separate resources are allocated to support Monitoring and Evaluation (USD 112,000) under Component 5 of the project. It should be highlighted that the budget allocated for M&E is not detailed in the approved PIF and the budget allocated to cover these costs is taken from savings in other Components (primarily Component 1).

#### **4.3.3. Government inputs**

The Government of Cameroon (GoC) will provide cash and in-kind co-financing in the form of:

- 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;
- Government staff time;
- laboratory facilities and consumables;
- operational costs of pesticide legislation enforcement and control.

The government will host the PSMS system and ensure its ongoing maintenance and availability of up-to-date information on registered and banned pesticides. The Government will contribute to the promotion of alternatives to hazardous pesticides through MINADER in the form of in-kind staff time. In addition, GoC will provide in-kind co-financing to support project management including office space for the Project Management Team and M&E through the PMT National Focal Points.

#### **4.3.4. FAO inputs**

FAO is providing in-kind co-finance comprising staff time to support capacity building/training activities under each of the four technical components. The staff time includes national, regional and sub-regional support to the project, and from Headquarters through technical staff participation as Project Task Force members, and in supervision and oversight functions. The total estimated contribution is around USD 170,000 over the three years.

#### **4.3.5. Other co-financiers inputs<sup>1</sup>**

**Crop Life International** has financed the safeguarding of 45 metric tonnes of pesticides currently stored at Edea. A total expenditure of USD 1,721,162 has been made by CLI (co-finance letter attached).

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<sup>1</sup> Please also see section 1.2 b)

**University of Ngaoundere, Faculty of Sciences:** The university laboratories are equipped and staffed for analysis and testing of chemicals and pesticides (HPLC, GCMS and others), and will be available for the use of the project. The in-kind value of this service is estimated at USD \$1,000,000.

**Ministry of Agriculture and Rural Development:** The Ministry contribution of USD 4,311.212 includes support across all the components, including identification, infrastructure and safeguarding operations, monitoring and awareness raising for Component 1 (USD 91,212); awareness and infrastructure (storage) for the container pilots (USD 120,000); ongoing management of pesticide registration, inspection and quality control including laboratory functions (USD 3,820,000); infrastructure, demonstration and training on alternatives (USD 350,000); and finally, infrastructure and vehicle use to support M&E (USD 120,000).

#### **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 Cameroon as the BH, supported by Operations and Administrative Officer, 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.

## **4.5. 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).

## **4.6. MONITORING, EVALUATION AND REPORTING**

### **4.6.1. Oversight and reviews**

Project oversight will be carried out by the 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, under performing 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, outputs or activities of the project, but are caused by the rearrangement of inputs already agreed to or by cost increases due to inflation. These minor amendments 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 or renaming of implementing entities, 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 Evaluation Office.

#### **4.6.2. 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 112,000 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.

The day-to-day monitoring of the project implementation will be the responsibility of the Project Management Team 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 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 actions 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 actions and the achievement of output targets. An annual project progress review and planning meeting should be organized by the Project Management Team 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 fulfillment and monitoring of project outputs and outcomes.

#### **4.6.3. 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 Appendix 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 Team supported by the FAO LTO and LTU.

The network of farmers to be established under component 4 will also be an important source of information for the M&E system. Data collected from the network on participation in the container management system, on knowledge, attitudes and practices (KAP) and knowledge and opinions on communications activities will be important inputs for the relevant indicators in the Results Framework.

#### **4.6.4. Reports and their schedule**

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 be initiated within a six month inception period. An inception workshop will be held and immediately after the workshop, the Project Coordinator will prepare a project inception report in consultation with the FAO LTO. 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 Cameroon), LTO, LTU and the FAO GEF Coordination Unit and uploaded in FPMIS by the BH.

**Annual Work Plan and Budget (AWP/B):** The 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:** 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 co-financing received from all co-financing partners.

The PPR will be submitted by the 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 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 Project Coordinator to the FAO BH in Cameroon 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 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 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 of the project completion date the 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.

#### 4.6.5. Monitoring and evaluation plan summary

The monitoring and evaluation plan is summarized below.

Type of monitoring and evaluation activity	Responsible parties	Time frame	Budget
Inception Workshop	National Project Coordinator (NPC), Project Steering Committee, FAO (FAO Cameroon as Budget Holder - BH, FAO Lead Technical Officer and Technical Unit- LTO and LTU, FAO GEF Coordination Unit)	Within first two months of project inception	USD 7,000
Inception report	National Technical Coordinator (NTC) with inputs from project partners. Cleared by FAO LTO, LTU, BH and the FAO GEF Coordination Unit, and the Project Steering Committee.	Immediately after the project inception workshop	USD 1,500
Design and implementation of monitoring and evaluation system, including staff training	NTC with support from FAO LTO and LTU.	Within the first six months after the project inception	USD 12,500
Field-based impact monitoring	NTC with support from other project partners – local NGOs, farmers/producers associations.	Continually	USD 3,500
Supervision missions	FAO LTO/LTU.	Annual or as required.	Paid by GEF Agency fee
Project progress reports (PPRs)	NTC. 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.	Six- monthly	USD 4,500

Type of monitoring and evaluation activity	Responsible parties	Time frame	Budget
Project Implementation Review (PIR)	FAO LTO with inputs from the NTC, 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	PC with information from all co-financing partners.	Six monthly and annually as part of PPR and PIR.	USD 500
PSC meetings	Project Coordinator, PSC Chair, FAO Budget Holder	At least once a year	USD 19,000
Technical reports	PC, Consultants, FAO LTO/LTU	As appropriate	Component budgets
Mid- term evaluation	External consultant, Organized by FAO independent evaluation unit in consultation with the project team and other partners	At mid-point of project implementation	USD 31,000
Final evaluation	External Consultant, FAO independent evaluation unit in consultation with the project team and other partners	At the end of project implementation	USD 31,000
Terminal report	NTC, FAO LTO	At least one month before end of project	USD 1,500
			USD 112,000

#### 4.7. PROVISION FOR EVALUATIONS

An independent Mid-Term Evaluation (MTE) will be undertaken at project mid-term to evaluate 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.

#### 4.8. COMMUNICATION AND VISIBILITY

The project will develop a communications strategy that will identify the main target groups, messages and appropriate delivery mechanisms. Collaboration with prominent Cameroon NGOs to

design and execute communications campaigns, awareness-raising and outreach activities will maximise project impact by promoting participation and behavioural change in pesticide management in target groups. The communications strategy will include a component on container management, particularly targeting women and householders to encourage participation in the container collection scheme, and on alternatives, informing rural populations about the dangers and risks associated with pesticide use, as well as the availability of alternatives. Specific monitoring indicators will allow the project to monitor the performance of the communication strategy.

At the national level the project communication strategy will also support the Project Management Team to ensure two-way exchanges with stakeholders in order to progress project activities 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 the review of registration and post-registration systems.

All project communications will be in line with the GEF Communications and Visibility Policy in order to give adequate publicity to the action being implemented as well as to the support from the GEF. This will be explicitly included in the National Technical Coordinator terms of reference, as well as all other consultants or partners with a role in communications (including developing the project communication strategy, and communications aspects of Components 2 and 4 in particular). The Policy and guidelines documents will be provided to all relevant partners.

FAO serves as a knowledge network, and is respected for the information and communications generated to inform agricultural and natural resource management and development. FAOs websites have amongst the highest traffic in the United Nations systems, with other one million visits per month; activities in the area of pesticide risk reduction group are primarily communicated through <http://www.fao.org/agriculture/pesticides/en/>. The communication plan and activities will be aligned with FAO's corporate communication strategy.

## **5. SECTION 5: SUSTAINABILITY OF RESULTS**

### **5.1. SOCIAL SUSTAINABILITY**

The project is expected to generate community health benefits through decreased exposure to highly hazardous pesticides, by: removing sources of these chemicals from stockpiles and contaminated sites; removing contaminated containers from communities; promoting and encouraging availability and uptake of non-toxic alternatives; and enhancing the quality of products through better control of pesticides in their life cycle, ultimately reducing pesticide residues. 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<sup>1</sup>. Currently the direct and indirect costs incurred in pesticide mismanagement through pesticide poisoning, medical expenses and loss of capacity to work are significant –estimated annual cost of \$4.4bn in sub-Saharan Africa (UNEP 2013) – so reduction of these impacts of pesticide mismanagement will also result in indirect economic benefits to both victims and the public health system, as well as the direct improvements in farm incomes.

Due to the traditional roles and responsibilities of women, they are more vulnerable to the adverse effects of pesticides than men. Women constitute the bulk of the labor force in fruit and vegetable agricultural holding and processing units 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. Taking into account the comments of the Scientific and Technical Assessment Panel (STAP), the project will identify the specific differences in the roles of women and men in the crop cycle in Cameroon, and the related pesticide uses. As highlighted by the STAP, once these needs are understood they can be effectively integrated into alternatives training under Component 4. In addition, 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 used to harvest fruit and vegetables and for domestic purposes, often by women.

### **5.2. ENVIRONMENTAL SUSTAINABILITY**

Project activities related to environmental sustainability include the removal of key source contaminants from the environment: obsolete pesticide stocks including POPs; empty pesticides containers; and heavily contaminated sites. Project benefits related to environmental sustainability include the safe disposal and safeguarding of emergency stocks of POPs and other obsolete pesticides posing high risk to human health and environment, which are currently stored in substandard conditions. These pesticides will be repackaged, transported, and destroyed in an environmentally-sound manner, in compliance with Stockholm Convention and the Basel Convention on the Transboundary Movement of Hazardous Wastes, thereby mitigating the risk that they will be released to the receiving environment during the clean-up process.

The contaminated land remediation activities will remove the contamination source, and prevent any further leaching into the environment including groundwater sources. To promote sustainability of these activities, local technical staff will be trained in the safeguarding of obsolete stocks,

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<sup>1</sup> Documented evidence from the West African Regional Integrated Production and Pest Management Programme (Settle and Hama Garba, FAO 2009 [www.fao.org/templates/agphome/documents/IPM/WA\\_IPPM\\_2011.pdf](http://www.fao.org/templates/agphome/documents/IPM/WA_IPPM_2011.pdf) ).

investigation and remediation of sites, ensuring they have the knowledge to safeguard any further chemicals identified, and remediate any additional sites deemed to be priority.

These benefits are consistent with GEF objectives and the Millennium Development Goals.

### **5.3. FINANCIAL AND ECONOMIC SUSTAINABILITY**

This project will develop alternatives to conventional chemical pesticides using a typology of farming systems to identify a representative network of farmers to develop baseline data on pest control management practices. Through this approach a sustainable farming system will be promoted, with a sustainable yield, using less inputs including pesticides and chemical fertilizers, and contributing to the financial and economic sustainability of farmers. Further, 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.

Component 2 on container management will demonstrate the technical and financial viability of such container management schemes. The PPG has actively involved the private sector with a view to ensuring both that the pilot scheme will continue post-project; and that a national strategy will be adopted by the Cameroon Government committing to roll out the scheme nationally.

### **5.4. SUSTAINABILITY OF CAPACITIES DEVELOPED**

This project aims to build sustainable capacity in national institutions to implement MEAs. 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 and NGO representatives to promote alternatives to highly hazardous pesticides to prevent building up of future stocks through increased public awareness of the risks of pesticides; and the training of key national stakeholders in container management, to ensure capacity exists to implement the strategy over the long term. In addition the project will assist in building capacities of legislative and pesticide specialists from neighbouring CEMAC countries through the sharing of experiences in the development of a comprehensive pesticide framework, which slots into the regional CPAC regional pesticide registration agreement.

The project will also establish a National Pesticide Council which is expected to coordinate national mechanisms and priority actions as required by the NIP – taking advantage of the recent UNEP work on the costs of inaction and mainstreaming research and publications to encourage an improvement in post registration capacity.

### **5.5. APPROPRIATENESS OF TECHNOLOGY INTRODUCED**

The technologies to be used in the project must be relevant to the climatic and ecological conditions of Cameroon, in particular in the areas where the project will develop its activities. As such, the 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. Further to this, 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. Container management activities will also employ container washing, and recycling technologies, again based on pilot activities being carried out to ensure appropriate, affordable technologies are trialled, before being subsequently rolled out.

The relevance of the technologies was considered in detail during the PPG, and the results of this are outlined in Table 12, below.

Table 12: 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"> <li>✓ Expensive, but appropriate for high-risk obsolete pesticides that cannot be safely disposed of in Cameroon.</li> <li>✓ Not appropriate for wastes that can be safely managed in Cameroon, for example soils</li> </ul>
Triple rinsing and recycling of empty containers.	<ul style="list-style-type: none"> <li>✓ Increases overall cleanliness rate by over 90 %</li> <li>✓ Restricts the reuse of empty containers and therefore intoxication cases</li> <li>✓ Provides possibilities for recycling plastic and metal materials and using them for non-food purposes.</li> </ul>
Bioremediation and phytoremediation of soils contaminated with pesticides	<ul style="list-style-type: none"> <li>✓ Minimizes any contribution to the contamination of the environment</li> <li>✓ Utilizes local means (organic manures, native plants, etc.)</li> <li>✓ Develops local and regional expertise</li> <li>✓ Significantly less expensive than thermal treatment</li> </ul>
Alternatives to conventional chemical pesticides	<ul style="list-style-type: none"> <li>✓ Provides non-hazardous products</li> <li>✓ Efficiency tested and proven for controlling a number of target pests</li> <li>✓ Accessible through either local production or regulated importation</li> </ul>

## 5.6. REPLICABILITY AND SCALING UP

The project design is focused on executing pilot activities for alternatives to chemical pesticides, container management, and soil decontamination. Once pilot activities are executed the results will be assessed, and the design of activities improved based on the results of pilots. This approach will ensure activities are well developed, locally appropriate, and replicable in areas of Cameroon not explicitly included in the project, and also in neighbouring CEMAC countries facing similar challenges.

The container management pilot (Component 2) is supported by the legislative and regulatory review which will establish the necessary legal duty for companies to manage containers, in order to allow the pilot to be scaled-up nationally.



## APPENDICES

## APPENDIX 1: RESULTS MATRIX

Objective				
To reduce POPs releases from obsolete pesticide stockpiles and contaminated sites and strengthen the capacity for the sound management of pesticides.				
<b>Component 1: Safe disposal of POPs and other obsolete pesticides, and remediation of contaminated sites</b>				
Outcome 1	Outcome Indicator	Baseline	Target	Assumptions
Existing POPs and obsolete pesticide stocks disposed of in an environmentally sound manner and POPs pesticide contaminated sites remediated.	<p>a. Up to 100 tonnes of POPs and other obsolete pesticides disposed of by the end of year 2.</p> <p>b. Risk reduced at 2 highest risk sites by 50%</p>	<ul style="list-style-type: none"> <li>Currently approx. 45 metric tonnes of obsolete pesticide held in a central storage location at Edea safeguarded under Croplife funded works;</li> <li>FAO PSMS data on contaminated sites has highlighted 6 locations which require detailed investigation under the project.</li> </ul>	<ul style="list-style-type: none"> <li>Safeguarding of all remaining pesticide wastes in the country and collection to Edea central storage by end of year 1;</li> <li>Environmentally sound disposal of safeguarded obsolete pesticide waste in Cameroon by end of year 2;</li> <li>Detailed site investigations completed at the 6 target contaminated sites resulting in prioritisation by end of year 1;</li> <li>remediation strategies developed by end of year 2;</li> <li>Pilot scale remediation at two highest risk sites completed by end of project.</li> </ul>	<ul style="list-style-type: none"> <li>Inventory data is confirmed and all environmental assessment requirements are met according to FAO and national standards.</li> <li>Detailed site assessments confirm the volumes of waste and appropriateness of on-site remediation technologies.</li> </ul>
Output	Indicator	Baseline	Target values	Data Collection and reporting

			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsibility for data collection
<b>Output 1.1</b> Strategy for the disposal of up to 100 tons of obsolete pesticides and associated wastes developed.	National EA and EMP developed and published.	CropLife Clean Farms inventory of safeguarded materials stored at Edea available	Validation of CropLife inventory data and inclusion of any new stocks. EA and EMP disclosed and approved.				Disclosure of EA and EMP in FAO format	MINEPDED with international consultant.
<b>Output 1.2</b> Disposal of approximately 100 tons of obsolete pesticides and associated wastes	Up to 100 metric tonnes of obsolete pesticides are destroyed in accordance with the Basel and Stockholm Conventions.	45 tonnes of obsolete stocks safeguarded under CropLife Clean Farms project.	International tender for waste management services developed based on revised data	All waste exported and destroyed in accordance with the Basel and Stockholm Conventions			<ul style="list-style-type: none"> <li>Contract documents ;</li> <li>Basel export notifications ;</li> <li>Destruction certificates.</li> </ul>	MINEPDED and intl. waste management contractor.
<b>Output 1.3</b> High-priority contaminated sites remediated	<ul style="list-style-type: none"> <li>Detailed site survey data disclosed nationally;</li> <li>Risk from 2 highest risk locations reduced by 50%.</li> </ul>	Initial site evaluation data entered into PSMS	Detailed site investigations completed and Conceptual Site Models (CSM) developed	Risk reduction strategies and remediation plans and options for local on-site treatment approved	Pilot on-site remediation actions implemented in 2 highest risk locations	Continuation of on-site remediation actions and assessment of risk reduction at locations	<ul style="list-style-type: none"> <li>Publication of CSMs ;</li> <li>Analytical results from assessment of risk reduction</li> </ul>	MINEPDED, international consultant, contractor

<b>Component 2: Management of empty pesticide containers</b>									
Outcome 2		Outcome Indicator		Baseline		Target		Assumptions	
Risks to the environment and human health from empty pesticide containers reduced through establishing and enhancing container management systems at national level		a) 35% of the containers entering the market for use are triple rinsed at the end of their life. b) 25% of the containers entering the market are recycled. c) Number of incidents of pesticide poisoning reported to health and hospital centres in pilot zones reduced.		<ul style="list-style-type: none"> <li>PPG report on the practices for management of empty pesticide containers</li> <li>Existing programme implemented by Cameroon Development Corporation (CDC) which collects empty pesticide containers in the South West of the country in banana, rubber trees and oil palms production areas</li> <li>Container management systems developed by CDC and SODECOTON</li> <li>No consolidated data on poisonings – but is available from hospital centres</li> </ul>		National scheme for pesticide container management developed based on project results at the end of year 4.		Existing container management schemes disclose all information and funding of a national scheme is secured from alternative sources (Government, private sector).	
Output	Indicator	Baseline		Target values		Data Collection and reporting			
				Year 1	Year 2	Year 3	Year 4	Means of verification	Responsibility for data collection
<b>Output 2.1</b> Pilot management scheme of empty pesticide containers (collection, rinsing, transport, storage and recycling) developed.	2 pilot schemes designed by project year 2	<ul style="list-style-type: none"> <li>PPG Report on the management of empty pesticide containers</li> <li>Draft law on pesticide container recycling</li> </ul>		<ul style="list-style-type: none"> <li>Updating evaluation of management of empty pesticide containers in Cameroon, defining actors operating in agro-ecological zones;</li> <li>Development of regulations linked to container recycling</li> </ul>	<ul style="list-style-type: none"> <li>Development of empty pesticide container management schemes and action plan (by agro-ecological zone and container type);</li> <li>Adoption of container recycling regulations by national authorities</li> </ul>	<ul style="list-style-type: none"> <li>Endorsement of container management schemes and action plan by regional and national authorities.</li> </ul>	<ul style="list-style-type: none"> <li>Adoption of national law and regulations on pesticide container management.</li> </ul>	<ul style="list-style-type: none"> <li>Publication of legislation and regulations;</li> <li>Publication of schemes for 5 zones.</li> <li>Government Gazette</li> </ul>	<ul style="list-style-type: none"> <li>MINEPDED and national consultant</li> </ul>

<p><b>Output 2.2</b> Implementation of pilot projects on management of empty pesticide containers in North and South-West Cameroon</p>	<ul style="list-style-type: none"> <li>• 2 pilot schemes operational</li> <li>• Percentage of containers sold are returned for recycling (see Target)</li> </ul>	<p>Existing container management schemes organised by pesticide suppliers in areas where cash crops such as sweet banana, tea, palm oil etc are produced</p>	<p>Development of a national programme to raise awareness on the risks associated with poor management of empty pesticide containers</p>	<p>Implementation of communications and awareness strategy targeting vulnerable groups.</p>	<ul style="list-style-type: none"> <li>• Licensing of new facilities for container recycling;</li> <li>• Implementation of pilot scheme in two regions including triple rinse campaign. 25% of containers returned</li> </ul>	<p>Continuation of implementation and review of implementation in two regions. 50% of containers returned</p>	<p>Independent M&amp;E reports</p>	<p>Evaluators</p>
<p><b>Output 2.3</b> National empty pesticide container management strategy developed</p>	<p>National pesticide container management strategy adopted by project year 4.</p>	<ul style="list-style-type: none"> <li>• Law No. 89/027/1989</li> <li>• Law No. 96/12 of 5 August 1996</li> <li>• draft law regulating the management of empty pesticide containers in Cameroon;</li> </ul>		<p>Strengthening the regulatory and institutional framework for the management of empty pesticide containers</p>	<p>Development of strategy for empty pesticide container management.</p>	<p>Endorsement of national strategy by Cameroon Government.</p>	<p>National workshop report; Outreach and awareness programme</p>	<p>MINEPDED, MINADER, Pesticide Industry, Farmers Associations</p>

Component 3: Strengthening institutional and regulatory framework for pesticide management										
Outcome 3	Outcome Indicator	Baseline	Baseline	Target	Assumptions					
Regulatory framework and institutional capacity strengthened for sound management of pesticides throughout their lifecycle	a) Legislative texts and regulations cover full pesticide life cycle and are in compliance with Code	Legislation exists for environmental protection but not Pesticide Management CEMAC Regulation exists but is not implemented in practice POPTT 1.4.2.3 status = 2 ( <i>exists but not enforced</i> )	Legislation exists for environmental protection but not Pesticide Management CEMAC Regulation exists but is not implemented in practice POPTT 1.4.2.3 status = 2 ( <i>exists but not enforced</i> )	<b>Year 1 &amp; 2:</b> Legislation and registration for all pesticides in compliance with Code drafted (Y1) and consulted (Y2) <b>Year 3 &amp; 4:</b> Draft legislation approved and adopted; national workplans, budgets and reports available from NPC POPTT status = 3 ( <i>up to date &amp; enforced</i> )	GoC willing to review and amend their national legislation. The process is completed within the project timeframe.					
	b) Number of pesticide inspections and quality control analyses conducted	Data not available in a compiled form (including customs, counterfeit, etc) Laboratory upgraded but staff require regular training and sustainability of operations is not assured	Data not available in a compiled form (including customs, counterfeit, etc) Laboratory upgraded but staff require regular training and sustainability of operations is not assured	<b>Year 1 &amp; 2:</b> Assessment of capacity and review of mandates; training of inspectors <b>Year 3 &amp; 4:</b> Monitoring and reporting of inspections and results	Inspectors are in post as provided by legislation/organograms FAO Inspection Manual is appropriate for adaptation/ use					
	c) Information exchanged by compliance and enforcement institutions	No formal mechanism for exchange e.g. notification of new registrations No publicly accessible list of registered pesticides	No formal mechanism for exchange e.g. notification of new registrations No publicly accessible list of registered pesticides	<b>Year 3 &amp; 4:</b> Formal mechanism established; registration decisions shared PSMS for registration, re-registration and de-registration of pesticides. (PY2)	Government and regulatory agencies perceive the value of PSMS and the benefit of exchanging information Agencies are able to access PSMS online...					
Output	Indicator	Baseline	Target values	Year 1	Year 2	Year 3	Year 4	Data Collection and reporting	Means of verification	Responsibility for data collection
<b>Output 3.1</b> Pesticide management legislation and registration system revised and improved in	<u>Indicator 3.1</u> New comprehensive draft legislation and supporting texts submitted and adopted by Parliament	2003 law on phytosanitary protection and 1996 one on environmental protection not specific on pesticide management; predates 2006 regional	Consultation		Draft legislation	Submission for approval by Parliament			CPAC report on pesticides in member states	Legal consultant
	<u>Indicator 3.2</u> Number of countries /				Representatives from 5 other	Paper finalized and				

Output	Indicator	Baseline	Target values				Data Collection and reporting Means of verification	Responsibility for data collection
			Year 1	Year 2	Year 3	Year 4		
conformity with the Code and regional regulations	institutions contributing to the paper on CEMAC	CEMAC regulation, 8 supporting decrees <sup>1</sup> – overlapping yet incomplete institutional responsibilities. 2006 CEMAC Regulation not in force in any country		CEMAC states attend final validation workshop	disseminated			
<b>Output 3.2</b> National Phytosanitary Council coordinates pesticide life cycle management and control	<u>Indicator 3.3</u> Number of members (operational level ; and high level) attending meetings	Established by Decree 2005/0769/PM (6/4/05) but has never met NIP assigns responsibility to MINADER, MINEPDED MINEPIA MINSANTE & IRAD	8 operational level <sup>2</sup>	16 (8 operational + 8 high level) members trained Min 25% improvement in pre-and post-training assessments	16		Council TOR Meeting minutes	MINADER
	<u>Indicator 3.4</u> Budget and activities of the Council for pesticide management through lifecycle	Draft Action Plan for pesticide management developed under Gates Foundation project	Policy brief outlining needs	Draft Action Plan & budget approved & submitted	Tbd based on analysis	Tbd based on analysis		Policy brief Annual pesticide mgmt. report

<sup>1</sup> Décret N°2005/0770/PM (Lutte phytosanitaire); Décret N° 2005/0769/PM (Conseil National Phytosanitaire); Décret N° 2005/0772/PM (homologation); arrêté conjoint n°004 mineped/mincommerce (emballages non biodegradables); Arrêté N° 002 MINEPDED (déchets industriels); Arrêté No 001 /MINEPDED du 15 octobre 2012 (permis environnementale); Décret N° 2011/2581/PM (substances chimiques); Décret N° 2011/2584/PM (sol et sous-sol)

<sup>2</sup> The members listed in the NIP, plus ANOR + Customs

Output	Indicator	Baseline	Target values				Data Collection and reporting Means of verification	Responsibility for data collection
			Year 1	Year 2	Year 3	Year 4		
<b>Output 3.3</b> Increased national capacity for pesticide inspections and post-registration control	<u>Indicator 3.5</u> Number of mandated and sworn in pesticide inspectors	Estimated 100 MINADER staff involved in inspections. <i>Tbd by assessment of regulatory capacity</i>	Review mandates and legal status	40 mandated and trained Min 25% improvement in pre-and post-training assessments			Training reports Performance tests	Trainer
	<u>Indicator 3.6</u> Number of inspections carried out by pesticide inspectors	Min Public Health carries out inspections; customs inspections, MINADER inspections Data not available	Baseline to be established		10% more than baseline	30% more than baseline	Inspection reports	MINADER, MINEPDED, MINCOMMER CE
<b>Output 3.4</b> Information accessible and exchanged on pesticide registration, re-registration and de-registration; and imports	<u>Indicator 3.7</u> Data available on quantities of pesticides imported; and lists of registered, re- and de-registered products	2,753t imported (MINADER 2007); OR 4,451t (CropLife Cameroun, 2008) List of registered products not updated	Establish MINADER Declarations for all imports List of registrations online	Customs submit import data to MINANDER & NPC				TC
	<u>Indicator 3.8</u> Data available on pesticide exposure incidents at least in the container management pilot areas	Exposures are reported at hospital centres; Poison Centre exists but pesticides are not always reported as the cause	Review of data available					TC, MINSANTE
	<u>Indicator 3.9</u> Mechanisms and volume (data and stakeholders) of information exchange	Obsolete stocks in PSMS Registration Committee meets every 6 months	<i>Tbd based on information audit &amp; needs analysis</i> (may include PSMS updates e.g. registered pesticide or quality and import lab results; Min Ag website; logs of emails or other information sharing tools)				Audit report	MINANDER
<b>Output 3.5</b> National laboratory	<u>Indicator 3.10</u> Improvement in capacity to operate existing	14 technical staff at the laboratory GC-MS; Spectro-		14 trained Min 25% improvement	14 trained Min 25% improvement	Training reports Performance	Trainer, MINANDER	



Output	Indicator	Baseline	Target values				Data Collection and reporting Means of verification	Responsibility for data collection
			Year 1	Year 2	Year 3	Year 4		
technical staff capacity increased and sustainable operational plan developed	equipment	photometer; Atomic Absorption Spectrophotometer (AAS) and Kjeldahl apparatus available		in pre-and post-training assessments		in score	tests	
<b>Output 3.6</b> National capacity increased to implement registration in line with the Code of Conduct	<b>Indicator 3.11</b> Number of members of national registration committee trained; and 1 student completing post-graduate diploma course	0		15 members of committee trained		1 Diploma degree received		

**Component 4: Promotion of alternatives to reduce the use of conventional chemical pesticides**

Outcome 4	Indicator	Baseline	Target	Assumptions
Alternatives to conventional pesticides successfully promoted and the use of chemical pesticides and highly hazardous pesticides reduced.	a) number of registrations of cotton and cereal pesticides, highly hazardous pesticides, and biopesticides	27 herbicide + 7 fungicide + 44 insecticide formulations registered for cotton; 28 of 44 insecticides in Classes I & II 3 formulations of phosphure d'aluminium & 1 of cyfluthrine for cereal storage 4 biopesticides registered	<b>Year 1 &amp; 2:</b> TBD <b>Year 3 &amp; 4:</b> 50% reduction in HHP registrations from baseline 5 biopesticides registered (+25%)	Some alternative methods are being effectively used by farmers within the network and can be used as examples for others Growers are interested and willing to alter current practices through trialling and introducing less hazardous alternatives- Extension services are interested in alternatives and willing to assist farmers
	b) Number of alternatives used by network farmers (e.g. IPM)	3 improved cotton varieties; spatial distribution of pests; efficacy of neem (Coordination Nationale des Cultures Annuelles; IRAD) Development of crop techniques as alternatives (IRAD and PNVRA). Alternatives to endosulfan identified	<b>Year 1 &amp; 2:</b> Extent and types of alternatives used and needs established by typology study <b>Year 3 &amp; 4</b> On-field effectiveness of alternatives trialled with farmers	

	c) Annual quantity of chemical and HHP used in project demonstration areas	Tbd during typology study	<b>Year 1 &amp; 2:</b> Extent of baseline chemical use established by typology study <b>Year 3 &amp; 4:</b> 30% decrease from the baseline	to use them.
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Output	Indicator	Baseline	Target values				Data Collection and reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsibility for data collection
<u>Output 4.1</u> Potential alternative products and/or practices for cotton pest control in the Sudano-Sahelian region of Cameroon identified	<u>Indicator 4.1</u> Proportion of members (M/F) of Profiling network using a) HHP/POPs b) alternative crop protection methods Description of alternatives	<i>tbc in baseline</i> Methodology piloted in Benin Research on Integrated Crop Protection in the forest zone	100 farmers participating in Profiling Study Network Baseline data collection	<i>Continued data collection</i>	# using alternatives = 150% of year 1	# using alternatives = 200% of year 1 0 use of HHP and/or POPs	Typology Study reports and data collection tools	MINANDER
	<u>Indicator 4.2</u> Number and description of potential alternatives	Alternatives to endosulfan report. 2000-5 AfDB FFS project Lake Chad 4 biopesticides registered; Unregistered biopesticides imported	10 alternatives identified Endorsement seminar - select which to test	Production of technical specifications for proven alternatives				
<u>Output 4.2</u> Identified alternatives to endosulfan, POPs and other obsolete pesticides tested for their technical and economic feasibility at farm	<u>Indicator 4.3</u> Number of field experiments conducted	3 tolerant, high-yield cotton varieties (IRAD) Development of crop techniques and biopesticides by IRAD, PNVRA and other labs.	Planning and implementation of field tests and experiments	150 farmers visit experimental plots	200 farmers & 100 professionals visit combined demo	Photos Media coverage Assessment report IPM strategies Endorsement seminar report	MINANDER	
	<u>Indicator 4.4</u>	Data not available, to be	Assessment	Assessment	Assessment of			

Output level	Indicator	Baseline	Target values				Data Collection and reporting	
			Year 1	Year 2	Year 3	Year 4	Means of verification	Responsibility for data collection
<b>Output 4.3</b> Viable alternatives to endosulfan, POPs and other obsolete pesticides promoted	Cost per ha/ kg yield of different alternatives	determined through profiling and testing		of field data		the value chain		
	<b>Indicator 4.5</b> Number of farmers and/ or professional agronomic advisors (M/F) trained in proven alternatives	National Agricultural Extension and Research Programme (PNVRA) with phytosanitary bases and brigades		Develop training curricula on alternative methods	Training of extension and other agents	Training of extension and other agents		MINANDER
	<b>Indicator 4.6</b> Media coverage achieved	Media outlets targeting farmers (LA VOIX DU PAYSAN, CPAC Info Pesticides, ECOVOX, etc); Agr extension and rural dvlpmt programmes on national and rural radio/TV Collaboration MINEPDED-CREPD	Training and promotion strategy developed	NGOs and civil society involved in implementation of good practices	Application strategies Training on implementation of strategies Media coverage		Promotion Strategy & Action Plan Communication tools, reports, broadcast records	NGO network (AFAIRD, CREPD )

## APPENDIX 2: PROVISIONAL WORK PLAN

Output	Activities	Responsible entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Component 1.</b>	<b>Safe disposal of POPs and other obsolete pesticides, and remediation of contaminated sites</b>																	
Output 1.1.	1.1.1. Update of inventory and outreach campaign	MINADER / CroLife																
	1.1.2. Development and approval of EA and EMP	MINEPDED/NTC																
Output 1.2.	1.2.1. Development of tender and award of contract	FAO and MINEPDED																
	1.2.2. Implementation of contract	Contractor																
	1.2.3. Monitoring and supervision of contact	MINEPDED /NTC																
Output 1.3.	1.3.1. REA and detailed site investigations	Bi / MINEPDED/NTC																
	1.3.2. Development and approval of remediation plans	Bi / MINEPDED /NTC /																
	1.3.3. Implementation of remediation plans	MINEPDED/ local contractors																
<b>Component 2.</b>	<b>Management of empty pesticide containers</b>																	
Output 2.1.	2.1.1. Revise legislation and regulations	MINEPDED and MINADER international consultant/NTC																
	2.1.2. Develop container management schemes	MINADER / CroLife / intl Consultant/NTC																
Output 2.2.	2.2.1. Development and implementation of outreach strategy	NGO/NTC																
	2.2.2. Farmer training programme	NGO/NTC																

Output	Activities	Responsible entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	2.2.3. Make pilot schemes operational																	
	2.2.4. Implement pilot schemes																	
Output 2.3.	2.3.1. Institutional capacity development for enforcement of container management																	
	2.3.2. Development of national strategy																	
	2.3.3. Endorsement workshop																	
<b>Component 3.</b>	<b>Institutional and technical capacities for registration and post-registration system</b>																	
Output 3.1.	3.1.1. Update on baseline and needs identified during project preparation	Legal consultant																
	3.1.2. National workshop to confirm way forward	Legal consultant																
	3.1.3. Drafting of law and regulations for pesticide management	Legal consultant																
	3.1.4. Consultation and validation workshop for the draft law, including CEMAC representatives for regional regulatory environment	Consultant/MINA DER/NTC																
	3.1.5. Submission of drafts to Parliament for adoption	MINADER/NTC																
	3.1.6. Paper on national perspectives and prospects for regional regulation	MINADER/NTC																
Output 3.2.	3.2.1. Operational level group meetings to develop policy brief & proposal for first meeting	Consultant/MIN ADER/NTC																
	3.2.2. Meetings and training and support to NPC	MINADER/NTC																
Output 3.3.	3.3.1. Capacity assessment & mandate review	Consultant/MINADER/NTC																
	3.3.2. Development of the training plan and material	Consultant/MINA DER/NTC																

Output	Activities	Responsible entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 3.4.	3.3.3. Training of staff on inspection and control of pesticides	Consultant/MINA DER/NTC																
	3.3.4. Support to facilitate and monitor inspections	MINADER/NTC																
	3.3.5. Information and publicity on inspection regime to regulated entities and public	MINADER/NTC																
Output 3.5.	3.4.1. Information audit and needs analysis	Consultant/MINA DER/NTC																
	3.4.2. Information exchange system and procedures proposed and agreed	Consultant/MINA DER/NTC																
	3.4.3. Roll-out and monitoring of information exchange according to agreed system	MINADER/NTC																
Output 3.6.	3.5.1. Evaluation of the function of the national laboratory including training needs assessment, and development of business plan	Consultant/MINA DER/NTC																
	3.5.2. Training plan developed and delivered based on training needs identified	Consultant/MINA DER/NTC																
	3.6.1. National training on registration	FAO/MINADER/N TC																
Component 4.	3.6.2. Masters course on risk management (selection of applicant and 2 year part time course)	FAO/MINADER/PSC																
	<b>Promotion of alternatives to conventional pesticides and communication strategy</b>																	
Output 4.1.	4.1.1. Establishment of a farmer network and collection and analysis of data	Consultant/MIN ADER/NTC																
	4.1.2. Identification of potential Plant Protection Products (PPPs) and/ or other practices as alternatives	Consultant/MINA DER/NTC																

Output	Activities	Responsible entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 4.2.	4.1.3. Stakeholders workshop to agree on alternatives and strategy for field testing	Consultant/MINA DER/NTC																
	4.2.1. Establish collaboration and protocols for efficacy trials of identified alternatives	IRAD / MINADER/NTC																
	4.2.2. Establishment of experimentation plots for the selected alternatives	IRAD/MINADER/NTC																
	4.2.3. Evaluation of value chain (import, local manufacturing, registration, distribution, extension, availability to farmers) of alternatives	IRAD / MINADER/NTC																
Output 4.3.	4.3.1. Preparation of training modules and training of extension agents and farm advisers	Consultant/MINA DER/NTC																
	4.3.2. Preparation and implementation of promotion strategy on proven alternatives	NGO/MINADER/NTC																

## APPENDIX 3: RESULTS BUDGET



Output 1.1.1 Strategy for the disposal of up to 100 metric tons of obsolete pesticides and associated wastes developed.

Output 1.2: Disposal of approximately 100 tons of obsolete pesticides and associated wastes.

Output 1.3: High-priority contaminated sites remediation pilots

Oracle Code	Description (ORACLE)	Units	No. of units	Unit Cost	Expenditures by Component			Total GEF	Expenditure by Year				
					Component 1: Disposal				Year 1	Year 2	Year 3	Year 4	Total
					1.1	1.2	1.3						
<b>5570</b>	<b>CONSULTANTS</b>												
<b>5542</b>	<b>INTERNATIONAL CONSULTANTS</b>												
	Outreach and awareness	Month	1	12,000			12,000		12,000				12,000
	EA and EMP development	Month	2	12,000	12,000		24,000		24,000				24,000
	Contaminated site assessment trainer	Month	1	12,000			12,000		12,000				12,000
	PSMS trainer	Month	2	12,000		24,000	24,000		24,000				24,000
	Safeguarding supervision trainer	Month	2	12,000			24,000		24,000				24,000
	Inventory data collection trainer	Month	1	12,000		12,000	12,000		12,000				12,000
<b>5542</b>	<b>Sub-total (international)</b>				<b>36,000</b>	<b>36,000</b>	<b>108,000</b>		<b>84,000</b>	<b>24,000</b>	<b>-</b>	<b>-</b>	<b>108,000</b>
<b>5543</b>	<b>NATIONAL CONSULTANTS</b>												
	Outreach and awareness	Month	3	2,000	6,000		6,000		6,000				6,000
	Outreach and awareness	Month	3	2,000	6,000		6,000		6,000				6,000
	EA and EMP Development	Month	3	2,000	6,000		6,000		6,000				6,000
<b>5543</b>	<b>Sub-total (national)</b>				<b>12,000</b>	<b>6,000</b>	<b>18,000</b>		<b>18,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18,000</b>
<b>5570</b>	<b>TOTAL CONSULTANTS</b>				<b>48,000</b>	<b>42,000</b>	<b>126,000</b>		<b>102,000</b>	<b>24,000</b>	<b>-</b>	<b>-</b>	<b>126,000</b>
<b>5900</b>	<b>TRAVEL</b>												
	inventory travel national				10,000		10,000		10,000				10,000
	Workshop travel EA EMP				2,000		2,000		2,000				2,000
	Safeguarding travel					17,000	17,000			17,000			17,000

Output 1.1.1 Strategy for the disposal of up to 100 metric tons of obsolete pesticides and associated wastes developed.

Output 1.2: Disposal of approximately 100 tons of obsolete pesticides and associated wastes.

Output 1.3: High-priority contaminated sites remediation pilots

		Expenditures by Component							Expenditure by Year				
Oracle Code	Description (ORACLE)	Units	No. of units	Unit Cost	Component 1: Disposal			Total GEF	Year 1	Year 2	Year 3	Year 4	Total
					1.1	1.2	1.3						
	Contam site travel						15,000	7,500					
<b>5900</b>	<b>TOTAL TRAVEL</b>				<b>12,000</b>	<b>17,000</b>	<b>15,000</b>	<b>44,000</b>	<b>23,000</b>	<b>13,500</b>	<b>7,500</b>	<b>0</b>	<b>44,000</b>
<b>5650</b>	<b>CONTRACTS</b>												<b>0</b>
	Remediation						125,000	62,500	62,500				125,000
	Analytical services in Cameroon					10,000	15,000	12,500			12,500		25,000
	Safeguarding					100,000	100,000		100,000				100,000
	Disposal					235,000	235,000		235,000				235,000
<b>5650</b>	<b>TOTAL Contracts</b>				<b>-</b>	<b>345,000</b>	<b>140,000</b>	<b>75,000</b>	<b>397,500</b>	<b>0</b>	<b>12,500</b>	<b>0</b>	<b>485,000</b>
<b>6000</b>	<b>EXPENDABLE PROCUREMENT</b>												<b>0</b>
	Personal Protective Equipment					5000	5000	3,333	3,333	3,333			10,000
<b>6000</b>	<b>Expendable procurement Budget</b>				<b>0</b>	<b>5,000</b>	<b>5,000</b>	<b>3,333</b>	<b>3,333</b>	<b>3,333</b>	<b>0</b>	<b>0</b>	<b>10,000</b>
<b>6100</b>	<b>NON-EXPENDABLE PROCUREMENT</b>												
	IT (computers, printers)					2500		2,500					2,500
	Pesticide sampling equipment						3000	1,333	1,333	1,333			4,000
<b>6100</b>	<b>TOTAL Non expendable procurement</b>				<b>2,500</b>	<b>1,000</b>	<b>3,000</b>	<b>3,833</b>	<b>1,333</b>	<b>1,333</b>	<b>0</b>	<b>0</b>	<b>6,500</b>
<b>6300</b>	<b>GENERAL OPERATING EXPENSES</b>												<b>0</b>
	Internet and telecomms					4500	2500	2375	2,375	2375	2375		9,500
	Medicals for staff						5,000	2,500	2,500	2,500	2,500		10,000
<b>6300</b>	<b>TOTAL GOE</b>				<b>4,500</b>	<b>7,500</b>	<b>7,500</b>	<b>4,875</b>	<b>4,875</b>	<b>4,875</b>	<b>4,875</b>	<b>4,875</b>	<b>19,500</b>
<b>TOTAL</b>	<b>COMPONENT 1</b>				<b>67,000</b>	<b>417,500</b>	<b>206,500</b>	<b>212,042</b>	<b>444,542</b>	<b>17,042</b>	<b>17,375</b>	<b>17,375</b>	<b>691,000</b>

Output 2.1: Pilot management schemes of empty pesticide containers (collection, rinsing, transport, storage and recycling) developed

Output 2.2: Implementation of pilot projects on management of empty pesticide containers in North and South-West Cameroon

Output 2.3: National empty pesticide container management strategy developed

Oracle Code	Description (ORACLE)	Units	No. of units	Unit Cost	Component 2: Container management			Total GEF	Expenditure by Year					
					2.1	2.2	2.3		Year 1	Year 2	Year 3	Year 4	Total	
<b>5570</b>	<b>CONSULTANTS</b>													
<b>5542</b>	<b>INTERNATIONAL CONSULTANTS</b>													
	Container management expert	Month	1	10,000		10,000	10,000		5,000	5,000				10,000
	Legal expert	Month	1	10,000	10,000		10,000		10,000					10,000
	Outreach and awareness	Month	2	8,000		16,000	16,000		8,000	8,000				16,000
	Container management expert	Month	1	10,000		10,000	10,000				5,000	5,000		10,000
<b>5542</b>	<b>Sub-total (international)</b>				<b>10,000</b>	<b>26,000</b>	<b>46,000</b>		<b>23,000</b>	<b>13,000</b>	<b>5,000</b>	<b>5,000</b>	<b>5,000</b>	<b>46,000</b>
<b>5543</b>	<b>NATIONAL CONSULTANTS</b>													
	Outreach and awareness	Month	6	1,500		9,000	9,000		4,500	4,500				9,000
	National legal expert	Month	6	1,500	9,000		9,000		9,000					9,000
	National container management	Month	9	1,500	4,500	4,500	13,500		3,375	3,375	3,375	3,375	3,375	13,500
<b>5543</b>	<b>Sub-total (national)</b>				<b>13,500</b>	<b>13,500</b>	<b>31,500</b>		<b>16,875</b>	<b>7,875</b>	<b>3,375</b>	<b>3,375</b>	<b>3,375</b>	<b>31,500</b>
<b>5570</b>	<b>TOTAL CONSULTANTS</b>				<b>23,500</b>	<b>39,500</b>	<b>77,500</b>		<b>39,875</b>	<b>20,875</b>	<b>8,375</b>	<b>8,375</b>	<b>8,375</b>	<b>77,500</b>
<b>5900</b>	<b>TRAVEL</b>													
	intl consultant travel				2,500	5,000	10,000		5,000		5,000			10,000
	nat consultant travel				2,500	5,000	10,000		2,500	2,500	2,500	2,500	2,500	10,000
	Workshop travel				2,500	2,500	7,500					7,500		7,500
	Incountry travel for implement					5,000	5,000				2,500	2,500		5,000
<b>5900</b>	<b>TOTAL TRAVEL</b>				<b>7,500</b>	<b>17,500</b>	<b>32,500</b>		<b>7,500</b>	<b>2,500</b>	<b>10,000</b>	<b>12,500</b>	<b>12,500</b>	<b>32,500</b>

Output 2.1: Pilot management schemes of empty pesticide containers (collection, rinsing, transport, storage and recycling) developed

Output 2.2: Implementation of pilot projects on management of empty pesticide containers in North and South-West Cameroon

Output 2.3: National empty pesticide container management strategy developed

Oracle Code	Description (ORACLE)	Expenditures by Component				Total GEF	Expenditure by Year				Total		
		Units	No. of units	Unit Cost	Component 2: Container management		Year 1	Year 2	Year 3	Year 4			
6000	<b>EXPENDABLE PROCUREMENT</b>				2.1	2.2	2.3					<b>0</b>	
	Materials for recycling operations					15000					7,500	7,500	15,000
6000	<b>Expendable procurement Budget</b>				0	15,000	0		0	0	7,500	7,500	15,000
6100	<b>NON-EXPENDABLE PROCUREMENT</b>												<b>0</b>
	Container recycling equipment					70000					70,000		70,000
6100	<b>TOTAL Non expendable procurement</b>				-	70,000	-		-	-	70,000	-	70,000
6300	<b>GENERAL OPERATING EXPENSES</b>												<b>0</b>
	Misc costs for operations					5000				1250	1,250	1250	5,000
6300	<b>TOTAL GOE</b>				-	5,000	-		1,250	1,250	1,250	1,250	5,000
<b>TOTAL</b>	<b>COMPONENT 2</b>				31,000	147,000	22,000		48,625	24,625	97,125	29,625	200,000

Output 3.1 Pesticide management legislation and registration system revised and improved in conformity with the Code  
Output 3.2: National Phytosanitary Council operational and coordinates pesticide life cycle management and control  
Output 3.3: Increased national capacity for pesticide inspections and post-registration control  
Output 3.4: Information accessible and exchanged on pesticide registration, imports and health impacts  
Output 3.5 National laboratory technical staff capacity increased and sustainable operational plan developed

Oracle Code	Description (ORACLE)	Units	No. of units	Unit Cost	Expenditures by Component						Total GEF	Expenditure by Year				Total	
					Component 3: Capacity Building							Year 1	Year 2	Year 3	Year 4		
					3.1	3.2	3.3	3.4	3.5	3.6							
<b>5570</b>	<b>CONSULTANTS</b>																
<b>5542</b>	<b>INTERNATIONAL CONSULTANTS</b>																
	Legal	Month	1	12,000	12,000									4,000	4,000		12,000
	Pesticide Management (inspection & info exchange)	Month	1.5	10,000		5,000	10,000							5,000	5,000		15,000
	Pesticide management - registration	Month	1	10,000						10,000				10,000			10,000
	Pesticide Q/C laboratory	Month	1.5	10,000					15,000					5,000	5,000	5,000	15,000
<b>5542</b>	<b>Sub-total (international)</b>				<b>12,000</b>	<b>-</b>	<b>5,000</b>	<b>10,000</b>	<b>15,000</b>	<b>10,000</b>				<b>9,000</b>	<b>24,000</b>	<b>14,000</b>	<b>52,000</b>
<b>5543</b>	<b>NATIONAL CONSULTANTS</b>																
	Legal	Month	3	2,000	6,000									2,000	2,000		6,000
	Pesticide management	Month	6.4	2,000		4,828	4,000	4,000						3,207	3,207	3,207	12,828
<b>5543</b>	<b>Sub-total (national)</b>				<b>6,000</b>	<b>4,828</b>	<b>4,000</b>	<b>4,000</b>						<b>5,207</b>	<b>5,207</b>	<b>5,207</b>	<b>18,828</b>
<b>5570</b>	<b>TOTAL CONSULTANTS</b>				<b>18,000</b>	<b>4,828</b>	<b>9,000</b>	<b>14,000</b>	<b>15,000</b>	<b>10,000</b>				<b>14,207</b>	<b>29,207</b>	<b>19,207</b>	<b>70,828</b>
<b>5900</b>	<b>TRAVEL</b>																
	Legal - international consultant				6,000									2,000	2,000		6,000
	Legal - national workshop				10,000										10,000		10,000
	Legal - validation mtgs + CEMAC				16,750										16,750		16,750
	National Phytosanitary Council					6,400								6,400			6,400
	Inspection service review & training						17,500							7,500	10,000		17,500
	Info exchange & database training							16,250						6,250	10,000		16,250
	Laboratory training								2,800					1,400	1,400	1,400	2,800

Output 3.1 Pesticide management legislation and registration system revised and improved in conformity with the Code  
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Output 3.5 National laboratory technical staff capacity increased and sustainable operational plan developed

Oracle Code	Description (ORACLE)	Units	No. of units	Unit Cost	Expenditures by Component						Total GEF	Expenditure by Year				Total				
					Component 3: Capacity Building							Year 1	Year 2	Year 3	Year 4					
					3.1	3.2	3.3	3.4	3.5	3.6										
	Registration training									1,500							1,500			
<b>5900</b>	<b>TOTAL TRAVEL</b>				<b>32,750</b>	<b>6,400</b>	<b>17,500</b>	<b>16,250</b>	<b>2,800</b>	<b>1,500</b>					<b>15,750</b>	<b>31,300</b>	<b>28,750</b>	<b>1,400</b>	<b>77,200</b>	
<b>5920</b>	<b>TRAINING</b>																			
	Registration - Diploma on Pesticide Risk Management	Person	1	25000			25,000								12,500	12,500			25,000	
<b>TOTAL TRAINING</b>					<b>0</b>	<b>0</b>	<b>25,000</b>	<b>0</b>	<b>0</b>	<b>0</b>					<b>0</b>	<b>12,500</b>	<b>12,500</b>	<b>0</b>	<b>25,000</b>	
<b>5650</b>	<b>CONTRACTS</b>																			
	Information materials				8,000										2,000	2,000	2,000	2,000	8,000	
	Info exchange database							10,000								10,000			10,000	
<b>5650</b>	<b>TOTAL CONTRACTS</b>				<b>8,000</b>	<b>-</b>	<b>-</b>	<b>10,000</b>	<b>-</b>	<b>-</b>					<b>2,000</b>	<b>2,000</b>	<b>12,000</b>	<b>2,000</b>	<b>18,000</b>	
<b>6000</b>	<b>EXPENDABLE PROCUREMENT</b>																			
	Personal Protective Equipment						5000								1,667	1,667	1,667		5,000	
	Laboratory consumables								10000						3,333	3,333	3,333		10,000	
<b>6000</b>	<b>Expendable procurement Budget</b>				<b>0</b>	<b>0</b>	<b>5,000</b>	<b>0</b>	<b>10,000</b>	<b>0</b>					<b>0</b>	<b>5,000</b>	<b>5,000</b>	<b>5,000</b>	<b>15,000</b>	
<b>6100</b>	<b>NON-EXPENDABLE PROCUREMENT</b>																			
	Pesticide sampling equipment						5000								2,500	2,500			5,000	
<b>6100</b>	<b>TOTAL Non expendable procurement</b>				<b>-</b>	<b>-</b>	<b>5,000</b>	<b>-</b>	<b>-</b>	<b>-</b>					<b>2,500</b>	<b>2,500</b>	<b>-</b>	<b>-</b>	<b>5,000</b>	
<b>6300</b>	<b>GENERAL OPERATING EXPENSES</b>																			
	Workshop costs				1,000	1,000	750	750	750	750						2,000	2,000	1,000	5,000	
	Other GOE				1,000	1,000	1,000	1,000	1,000						1,250	1,250	1,250	1,250	5,000	
<b>6300</b>	<b>TOTAL GOE</b>				<b>2,000</b>	<b>2,000</b>	<b>1,750</b>	<b>1,750</b>	<b>1,750</b>	<b>750</b>					<b>1,250</b>	<b>3,250</b>	<b>3,250</b>	<b>2,250</b>	<b>10,000</b>	
<b>TOTAL</b>	<b>COMPONENT 3</b>				<b>60,750</b>	<b>13,228</b>	<b>63,250</b>	<b>42,000</b>	<b>29,550</b>	<b>12,250</b>					<b>35,707</b>	<b>85,757</b>	<b>80,707</b>	<b>18,857</b>	<b>221,028</b>	

Output 4.1 Potential alternatives to POPs and other hazardous pesticides identified  
 Output 4.2 Alternatives tested for their technical and economic feasibility at farm level  
 Output 4.3. Viable alternatives promoted

Oracle Code	Description (ORACLE)	Expenditures by Component				Expenditure by Year						
		Units	No. of units	Unit Cost	Component 4: Alternatives	Total GEF	Year 1	Year 2	Year 3	Year 4	Total	
5570	<b>CONSULTANTS</b>				4.1	4.2	4.3					
5542	<b>INTERNATIONAL CONSULTANTS</b>											
	Pest and Pesticide Management	Month	2	10,000	10,000	10,000		20,000	5,000			20,000
	Communications Alternatives	Month	1	10,000		10,000		10,000				10,000
	Profiling and data collection development	Month	2	10,000	20,000			20,000				20,000
5542	<b>Sub-total (international)</b>				30,000	10,000	10,000	50,000	5,000	15,000	-	50,000
5543	<b>NATIONAL CONSULTANTS</b>											
	Profiling and data collection development	Month	15	1,500	22,500			22,500	11,250			22,500
5543	<b>Sub-total (national)</b>				22,500	-	-	22,500	11,250	-	-	22,500
5570	<b>TOTAL CONSULTANTS</b>				52,500	10,000	10,000	72,500	16,250	15,000	-	72,500
5900	<b>TRAVEL</b>											
	International			3500	10,500	10,500		21,000	5,250	5,250	5,250	21,000
	National consultants			100	4,000	4,000		8,000	2,000	2,000	2,000	8,000
	Enumerators			100	24,000			24,000	6,000	6,000	6,000	24,000
	Farmer/ extension trg			250			25,000	25,000		15,000	10,000	25,000
5900	<b>TOTAL TRAVEL</b>				38,500	14,500	25,000	78,000	13,250	28,250	23,250	78,000
5650	<b>CONTRACTS</b>											

Output 4.1 Potential alternatives to POPs and other hazardous pesticides identified  
 Output 4.2 Alternatives tested for their technical and economic feasibility at farm level  
 Output 4.3. Viable alternatives promoted

Oracle Code	Description (ORACLE)	Expenditures by Component				Expenditure by Year							
		Units	No. of units	Unit Cost	Component 4: Alternatives	Total GEF	Year 1	Year 2	Year 3	Year 4	Total		
					4.1	4.2	4.3						
	Profiling, field data collection & training				31,000	25,000		56,000	14,000	14,000	14,000	14,000	56,000
	Field testing & training					40,000		40,000		15,000	15,000	10,000	40,000
	Communications Strategy						35,000	35,000	10,000	10,000	15,000	10,000	35,000
<b>5650</b>	<b>TOTAL Contracts</b>				<b>31,000</b>	<b>65,000</b>	<b>35,000</b>	<b>131,000</b>	<b>14,000</b>	<b>39,000</b>	<b>44,000</b>	<b>34,000</b>	<b>131,000</b>
<b>6000</b>	<b>EXPENDABLE PROCUREMENT</b>												
	Survey materials				10,000			10,000	10,000				10,000
<b>6000</b>	<b>Expendable procurement Budget</b>				<b>10,000</b>	<b>0</b>		<b>10,000</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,000</b>
<b>6100</b>	<b>NON-EXPENDABLE PROCUREMENT</b>												
	IT (computers, printers)				15000			15,000	15,000				15,000
<b>6100</b>	<b>TOTAL Non expendable procurement</b>				<b>15,000</b>	<b>-</b>	<b>-</b>	<b>15,000</b>	<b>15,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>15,000</b>
<b>6300</b>	<b>GENERAL OPERATING EXPENSES</b>												
	General Operating Expenses				5,000	5,000		10,000	2,500	2,500	2,500	2,500	10,000
	Workshop costs					3,000		3,000		3,000			3,000
<b>6300</b>	<b>TOTAL General Operating Expenses</b>				<b>5,000</b>	<b>8,000</b>	<b>0</b>	<b>13,000</b>	<b>2,500</b>	<b>2,500</b>	<b>5,500</b>	<b>2,500</b>	<b>13,000</b>
<b>TOTAL</b>	<b>Component 4</b>				<b>152,000</b>	<b>97,500</b>	<b>70,000</b>	<b>319,500</b>	<b>96,000</b>	<b>71,000</b>	<b>92,750</b>	<b>59,750</b>	<b>319,500</b>



5. Monitoring and Evaluation

6. Project Management

Expenditures by Component										Expenditure by Year				
Oracle Code	Description (ORACLE)	Units	No. of units	Unit Cost	6. PM	5. M&E	Total GEF	Year 1	Year 2	Year 3	Year 4	Total		
<b>5300</b>	<b>SALARIES PROFESSIONAL</b>													
	Budget and Operations Officer	Month	48	2,020	6,972		<b>96,972</b>	24,243	24,243	24,243	24,243	96,972		
<b>5300</b>	<b>TOTAL SALARIES PROFESSIONAL</b>				<b>96,972</b>	-	<b>96,972</b>	<b>24,243</b>	<b>24,243</b>	<b>24,243</b>	<b>24,243</b>	<b>96,972</b>		
<b>5570</b>	<b>CONSULTANTS</b>													
<b>5542</b>	<b>INTERNATIONAL CONSULTANTS</b>													
	Evaluation expert(s)	Lumpsum				55,000	55,000		27,500		27,500	55,000		
	M&E trainer	month	0.5	10000		3,500	3,500	3,500				3,500		
	PM trainer	month	0.5	10000	3,500		3,500	3,500				3,500		
<b>5542</b>	<b>Sub-total (international)</b>				<b>3,500</b>	<b>58,500</b>	<b>62,000</b>	<b>7,000</b>	<b>27,500</b>	<b>0</b>	<b>27,500</b>	<b>62,000</b>		
<b>5543</b>	<b>NATIONAL CONSULTANTS</b>													
	National Technical Coordinator	Month	48	2,000	60,000	24,000	84,000	21,000	21,000	21,000	21,000	84,000		
<b>5543</b>	<b>Sub-total (national)</b>				<b>60,000</b>	<b>24,000</b>	<b>84,000</b>	<b>21,000</b>	<b>21,000</b>	<b>21,000</b>	<b>21,000</b>	<b>84,000</b>		
<b>5570</b>	<b>TOTAL CONSULTANTS</b>				<b>63,500</b>	<b>82,500</b>	<b>146,000</b>	<b>28,000</b>	<b>48,500</b>	<b>21,000</b>	<b>48,500</b>	<b>146,000</b>		
<b>5900</b>	<b>TRAVEL</b>													
	International trainer	travel	2	3500	2,500	2,500	5,000	5,000				5,000		
	International evaluations	travel	2	3500		7,000	7,000		3,500		3,500	7,000		
	National in country travel (PC and PM plus PSC)	days	85	100	3,500	5,000	8,500	2,125	2,125	2,125	2,125	8,500		
<b>5900</b>	<b>TOTAL TRAVEL</b>				<b>6,000</b>	<b>14,500</b>	<b>20,500</b>	<b>7,125</b>	<b>5,625</b>	<b>2,125</b>	<b>5,625</b>	<b>20,500</b>		
<b>5920</b>	<b>TRAINING</b>													
	<b>TOTAL Training</b>				<b>0</b>		<b>0</b>							
<b>6300</b>	<b>GENERAL OPERATING EXPENSES</b>													
	Inception and closing workshop, PSC meetings					15,000	15,000	5,000	2,500	2,500	5,000	15,000		
<b>6300</b>	<b>TOTAL General Operating Expenses</b>				<b>-</b>	<b>15,000</b>	<b>15,000</b>	<b>5,000</b>	<b>2,500</b>	<b>2,500</b>	<b>5,000</b>	<b>15,000</b>		
<b>TOTAL</b>					<b>166,472</b>	<b>112,000</b>	<b>278,472</b>	<b>64,368</b>	<b>80,868</b>	<b>49,868</b>	<b>83,368</b>	<b>278,472</b>		

## APPENDIX 4: DRAFT TERMS OF REFERENCE

### National Technical Coordinator

Under the overall supervision of the FAO Budget Holder, the National Project Coordinator and the PSC, and with direct technical support and guidance from the LTO, the National Technical Coordinator (NTC) will be responsible for:

- Coordinating all project activities at national level;
- Under the guidance and direction of the LTO, 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, including ensuring that all activities appropriately credit the GEF and are in line with its Communication and Visibility Policy and guidelines;
- Draft annual work plans and budget revisions for approval by PSC, BH and LTO
- Compile information on co-financing from national partners; and
- Perform other related duties as required.

#### Requirements:

1. University degree in Agronomy and / or plant protection or integrated pests and pesticide management pest or in a related subject matter;
2. Five years of relevant professional experience;
3. Excellent oral and written communication skills in French/English;
4. Familiarity with pest and pesticide management issues in the country;
5. At least two years project management/coordination experience;

### EMP and tender development (OPs)

Under the supervision of the NTC, FAO Lead Technical Officer, and in close cooperation with Croplife, the consultant(s) will undertake the following:

- 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 PC and Contractor in their preparation of the documentation needed under the Basel Convention for disposal of stocks

#### Requirements:

1. A degree in chemistry, environmental science or a related subject;
2. At least 10 years of relevant working experience;
3. Experience of developing EMP's in relation to safeguarding operations;

4. Understanding of international standards and good practice in relation to safeguarding operations;
5. Experience of safeguarding pesticides.
6. Ability to work in French and English.

#### **International Consultant: Contaminated site assessment and EMP development**

Under the direct supervision of the NTC 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 national analytical laboratories 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 sites 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;

#### 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 French and English.

#### **International Consultant: Container Management**

Under the overall supervision of the BH, LTO and NTC, the consultant will:

- Supervise the National Consultant to update the report on pesticide containers in Cameroon on empty pesticide container management for agricultural, livestock and public health pesticides in target areas 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 the target areas, 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

#### 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 Cameroon.
4. Excellent report writing skills in English; working knowledge of French would be an advantage.

#### **INTERNATIONAL LEGAL CONSULTANT - PESTICIDES LEGISLATION**

Under the technical supervision of the LTO/LTU, the operational supervision of the Budget Holder and in close collaboration with the NPC and NTC, the incumbent will:

1. Before his/her in-country missions, review the National Legal Consultant's report and submit comments thereon;
2. Travel to Cameroon to carry out extensive consultation with government stakeholders on the national legislation in place governing pesticides management, including Integrated Pest Management (IPM).
3. Based on the feedback received in the consultations above and taking into account any existing initiative for legislative reform, the international obligations of the government of Cameroon, prepare draft legislation at the parliamentary level or subsidiary in order to upgrade the legal framework on pesticides management;
4. Discuss the main elements of the draft legislation with government stakeholders in a workshop;
5. Prepare a report in writing summarizing the undertaken activities, presenting the draft legislation and making recommendations for its implementation.

Qualifications and experience:

Degree in law. Experience in legislative drafting and familiarity with agricultural legislation, preferably on plant protection. Proficient in English and working knowledge of French.

#### **International Consultant: Pesticide Management (inspection and information exchange)**

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

- Work with pesticide inspectors and customs officials to assess and improve inspection and sampling procedures in Cameroon:
  - Support national consultant in developing baseline study (on current regulations, procedures and capacities for monitoring, controlling, inspecting and sampling of

- pesticides), and facilitate stakeholder agreement on recommendations and strategy for strengthening inspection capacity.
- On acceptance of the recommendations by the NPC, the International consultant will develop the training programme, including standard inspection methodologies and checklists; and the equipment required for sampling, sample storage and personal protection
  - Train inspectors on identification of pesticide products, inspection and sampling methods.
- On information exchange, the consultant will assess both government and private sector inspection and enforcement capacity in order to propose effective information exchange mechanisms:
    - Supervise the national pesticide management consultant to produce report on capacity for inspection (by government and private sector) of pesticides throughout the life-cycle of pesticides from entry point through formulation, storage, distribution, retail and use. The report should identify critical gaps in information exchange for the inspection of pesticides and recommendations for capacity building measures to address them.
    - 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 Cameroon.

#### 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. At least 5 years experience in the inspection for quality control of chemical, pharmaceutical or pesticide products
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
7. Working knowledge of French would be an advantage.

#### **International Consultant Pesticide Q/C laboratory expert**

Under the supervision of the NTC and FAO BH and LTO, and in liaison with technical departments and other national stakeholders, the consultant will;

- Undertake in-service assessment and evaluate the needs and requirements for laboratory analysis at the target laboratory;
  - Run and evaluate the functionality and accuracy of existing chromatographs and other analytical instruments;
  - Run and evaluate the current storage facilities for the analytical standards, solvents and other consumables;
  - Review the existing instruments for the preparation of samples for pesticide residues and quality control of pesticide formulations;

- Review and assess the current professional skills to ensure proper sampling, storage, preparation, analysis, calculation and interpretations of the results related to quality control of pesticide formulations;
- Develop a list of materials and equipment, solvents and analytical standards required to ensure the operational activities of the laboratory under its current mandate, along with their order of priority, possible sources and technical specifications;
- Assist the laboratory in developing a strategy or Business Plan for long-term implementation of the requirements, including financing options, maintenance and replacement of equipment, preparation for external certification, and staff capacity development and retention
- Propose a technical profile to be recruited or training curricula required for existing technical staff to ensure the professional activities for quality control of pesticide formulations;

Requirements:

1. Advanced degree in organic chemistry
2. 10 years experience in laboratories and/or quality control of pesticides
3. 5 years experience related to laboratory certification and management
4. Ability to work in French and English.

**National Consultant – Contaminated sites**

Under the direct supervision of the NTC 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 French and English.

### **National Consultant – Container Management**

Under the supervision of the NTC 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 including estimating the current level of practice of “triple rinsing”; national capacity and options for collection and recycling
- 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 Cameroon.
4. Excellent report writing skills in English plus written and spoken communications in either French

### **National Consultant – Legislation Review**

Under the supervision of the FAO BH, NTC and international legal consultant the National Legal Consultant will:

1. Before the first mission of the international consultant, and based on his instructions, prepare a report in writing reviewing the national legislation and policies in place for pesticides management, including Integrated Pest Management (IPM), pesticides residues and disposal of obsolete pesticides, and assessing it in the light of the international obligations of the government. Identify the legal gaps and prepare a list of laws and regulations which require enactment reforms;
2. When necessary, translate legislation from French to English;
3. Submit the above report to the international consultant and NTC and review it based on his/her comments;
4. Before every mission of the international consultant, prepare an agenda of meetings with government stakeholders and assist government counterparts with the organization of the workshop;
5. During the mission of the international consultant, participate in the meetings and assist him/her on any mission activity, including the development of draft legislation;
6. Provide assistance for the organization and participate in the national workshops for discussing legal recommendations and proposals;
7. Assist in the drafting of the national primary and implementing legislation and their translation into French;
8. Prepare final reports after the missions of the international consultant and a final report including comments to the draft legislation.
9. As requested by the international consultant, make inputs into the final project legal report;
10. Undertake any other function that may be necessary for the implementation of the project.

Qualifications and experience:

Degree in law. Experience in legislative drafting and familiarity with agricultural legislation, preferably on plant protection. Proficient English.

#### **National Consultant – Pesticide Management**

Under the overall supervision of the international consultant and NTC, the National Pesticide Expert will undertake an assessment of capacity and activity for inspection of pesticides throughout the life-cycle of pesticides 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 MINADER 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.
- Prepare a report for review by the International Consultant (Pesticide Inspection) with recommendation for the network of inspectors to exchange information (who, when what based on the patterns of use of pesticides in the country)
- Perform training with the international consultant for inspectors on identification of pesticide products, inspection and sampling methods.
- Assess information produced, available and shared by national pesticide management activities, including registration procedures, import quantities, inspection, quality control, health statistics, based on stakeholder meetings and other resources (e.g. information recording processes, systems, and infrastructure, Guidelines and directives, regulations, manuals, guidelines and checklists)
- Provide support to the National Phytosanitary Council meetings including providing working papers, supporting meetings preparation, and consulting with members

#### 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 Cameroon.
4. Excellent report writing skills in English plus written and spoken communications in French

#### **National Consultant – Profiling and data collection development**

Under the direct supervision of the NTC and International Consultant, the consultant(s) will be responsible for the following activities:

- Support the development of the profiling study into the target farming systems, testing of field and sampling tools,
- recruit members of the farmer network in line with the typology study requirements, including both professional and small-scale women farmers
- Contribute to the development and test data collection tools
- Organise and coordinate field surveys of farmer network according to the strategy in the typology study (minimum field work in Year 1 for baseline and final year for monitoring changes)
- Supporting the international consultant in establishing demonstrations of alternative methods currently used by network members
- Support the international consultant in establishing a new demonstration site for one or more of the identified alternatives, including coordination and contractual arrangements with research or other partners



Requirements:

1. Advanced degree in agriculture, statistics, or related subject
2. 5 years experience in survey design and implementation in agricultural settings
3. Excellent communication skills in French and English.

**National Communications Consultant (containers and alternatives) - NGO**

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

- Consult with project partners and consultants responsible for delivery of outcomes 2 and 4 to understand the project expected results on container management and adoption of alternatives; 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
- Design and conduct a statistically valid KAP survey to gather baseline, mid-term and final data
- 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 French and 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 French and English.

## APPENDIX 5: PROCUREMENT PLAN

(To be completed during the inception phase of the project)

**DATE:**

**PROJECT TITLE AND SYMBOL:**

Ref. No.	Requirement	Unit	Estimated Quantities	Estimated Cost	Unit Price	Solicitation Method	Procurement Method	Buyer	Targeted Tender Launch Date	Targeted Contract Award Date	Targeted Delivery Date	Final Destination and Delivery Terms	Status	Other Constraints/Considerations