FAO/GLOBAL ENVIRONMENT FACILITY

PROJECT DOCUMENT

PROJECT TITLE: Strengthening capacities for the sound management of pesticides including POPs (MSP) **PROJECT SYMBOL: GCP/URU/031/GFF**	
Recipient Country: Uruguay	
Resource Partner: Global Environment Facility (GEF)	
FAO project ID: 615540	**GEF/LDCF/SCCF Project ID: 5144**
Executing Partner(s): Ministry of Housing, Land Planning and Environment (MVOTMA)	
Expected EOD (starting date): January 2015	
Expected NTE (End date): July 2018	
Contribution to FAO's Strategic Framework[1]	**a. Strategic objective/Organizational Outcome:** SO2, OO2. **b. Regional Result/Priority Area:** Plant and Animal Health and Food Safety[2]; Strategic Objective 2 Increasing production efficiency and adoption of good practices for sustainable agriculture, enhancing climate change adaptation, improving governance mechanism and supporting decision-making for sustainable development[3]. **c. Country Programming Framework Outcome:** Priority area 4: Biosafety, animal and plant health, and food safety[4].
GEF Focal Area: Chemicals (Persistent Organic Pollutants – POPs)	
GEF Strategic Objectives: CHEM-1 Outcome 1.4: POPs waste prevented, managed and disposed of, and contaminated sites managed in an environmentally sound manner	
Environmental Impact Assessment Category: B	

Financing Plan: GEF allocation:	US$ 1,874,028
Co-financing:	
MVOTMA	US$ 2,008,000
MGAP	US$ 1,080,000
FAO	US$ 300,000
AC *Campo Limpio*	US$ 2,620,000
OSE	US$ 1,250,000
Subtotal Co-financing:	**US$ 7,258,000**
Total Budget:	**US$ 9,132,028**

[1] For projects operated by country offices, it is necessary to link projects in FPMIS at OR level. For all other projects, linkage at product/service level is necessary.

[2] FAO Regional Conference for Latin America and the Caribbean (33rd LARC, 2014), Priorities for FAO Activities in the Region 2014-17. See: http://www.fao.org/docrep/meeting/030/mk075e.pdf

[3] FAO Regional Conference for Latin America and the Caribbean (33rd LARC, 2014), Priorities for FAO Activities in the Region 2014-17. See: http://www.fao.org/docrep/meeting/030/mk075e.pdf

[4] The Priority area's objective is to promote the adequate use of pesticides and agricultural agrochemicals in general, among others. Source: Country Programming Framework FAO/Uruguay 2011-2015: ftp://ftp.fao.org/osd/CPF/Country%20NMTPF/Uruguay/Status/Final_CPF%20Uruguay%202011%202015.pdf

EXECUTIVE SUMMARY

Uruguay is an essentially agricultural country, in which the exports of raw materials and manufactured agricultural products represent around 60% of the total value of exports. One of the main environmental aspects related to agricultural activities is the use of agro-chemicals for pest control. The intensification process experienced by Uruguay's productive sector in the last 20 years as a result of technological innovations, expanding agriculture (especially soybean cultivation) and favourable conditions for the Uruguayan agricultural products in the international market, has increased pressure on natural resources. A total of approximately 38,000 tons of pesticides (herbicides, insecticides, fungicides and others) were produced in 2012, many of them with high levels of toxicity and eco-toxicity. Over 85% of the active ingredients used for pesticide formulation in Uruguay are imported.

Glyphosate is the most used herbicide in the cultivation of soybeans and has been the main contributor to this increase in pesticide use since 2005. More recently, the use of atrazine as herbicide on corn and sorghum (both for grain and forage) and 2,4-D to eliminate Glyphosate-resistant weeds have also shown significant increases.

Uruguay has a legal, regulatory and operational framework suitable for the life cycle management of pesticides. However, there are still a number of important technical, institutional and knowledge barriers that need to be addressed to ensure the environmentally sound management of pesticides in the country. These include: (i) gaps in the legal and policy framework for pesticides; (ii) weak environmental monitoring and risk management of pesticides; (iii) weak management of empty pesticide containers, obsolete pesticide stocks and contaminated sites; (iv) low adoption / limited knowledge among producers of alternatives to current pesticide use and handling; and of sustainable use and management of pesticides throughout their lifecycle.

The objectives of the project are to safely dispose 160tn of obsolete pesticides including POPs and containers, and to strengthen the lifecycle management of pesticides in Uruguay. These objectives are strategically supported on three pillars: (i) Uruguay's NIP priorities in the framework of the Stockholm Convention, (ii) the overall objectives of the GEF, and (iii) the specific needs and features of Uruguay to face the environmental risks caused by an explosive intensification of agricultural production.

In addition, the project will contribute to the overall objective of the Strategic Approach to International Chemicals Management (SAICM) to achieve the sound management of chemicals in order to reduce the adverse effects of pesticides on human health and the environment

The project is based on a solid normative, institutional and technical baseline, and includes lessons learned from local and international initiatives related to the proper management of pesticides. As such, the project is designed to be complementary to existing activities at the national level, and aims to make incremental contributions to the update, modernization and effective implementation of the instruments associated with the management of pesticides in Uruguay.

With GEF incremental financing, the project will be implemented through four components:

- Component 1: Reduction of stocks and elimination of obsolete pesticides and containers.
- Component 2: Strengthening the legal framework and institutional capacity for the rational and integral management of pesticides throughout their lifecycle.
- Component 3: Promoting Integrated Pest Management (IPM), pesticide sound use and management, and other alternative to hazardous pesticides, through demonstration units.
- Component 4: Strengthening environmental monitoring and response to risks from hazardous pesticides.

A comprehensive set of outcomes, outputs, activities and indicators have been developed for each component and summarized in the project's result framework.

FAO will be the GEF Agency responsible for the supervision and provision of technical guidance during the implementation of the project. As requested by the Government of Uruguay (GoU), FAO will administrate funds from GEF in accordance with the rules and procedures of FAO and GEF. The Ministry of Housing, Territorial Planning and Environment (MVOTMA) will be the lead project execution partner through the National Directorate of Environment (DINAMA). Within DINAMA, the Department of Waste and Substances (DRS) will be responsible for the coordination and execution of project activities, supported by a small Project Coordinating Unit (UCP). DRS will work closely with a set of public and private institutions, including the Ministry of Livestock, Agriculture and Fisheries (MGAP), the Civil Association *Campo Limpio*, the Water and Sanitation Company (OSE), farmer organizations and the private sector.

In order to ensure proper coordination, integration, and decision-making related to project implementation, an Inter-institutional Coordination Committee (CCI) and a Technical Monitoring Committee (CTS) will be created. The CCI will perform the functions of a Project Steering Committee.

The project has a duration of three and a half years and a budget of US$ 9,132,028 of which US$ 1,874,028 is GEF financing and US$ 7,258,000 is co-financing.

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GLOSSARY OF ACRONYMS

AUSID	Uruguayan Association of Conservation Tillage
AWP/B	Annual Work Plan and Budget
BH	Budget Holder
CAMAGRO	Commercial Chamber of Agrochemical Products
CEO	Chief Executive Officer (GEF)
CCI	Interinstitutional Coordination Committee
CSO	Civil Society Organization
CTS	Project Monitoring Committee
DACC	Agricultural Development and Climate Change Project (MGAP/World Bank)
DGDR	General Directorate for Rural Development
DGSA	General Directorate of Agricultural Services
DIGEGRA	General Directorate of Horticulture
DINAMA	National Directorate of Environment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMTK	Environmental Management Toolkit
FAGRO	School of Agronomy – University of the Republic (Uruguay)
FAO	Food and Agriculture Organization of the United Nations
GEBs	Global Environmental Benefits
GEF	Global Environment Facility
GEFSEC	GEF Secretariat
GOU	Government of Uruguay
INALE	National Dairy Institute
INAVI	National Grape and Wine Institute
INIA	National Institute for Agricultural Research
LATU	Technological Laboratory of Uruguay
LTO	Lead Technical Officer
LTU	Lead Technical Unit
MGAP	Ministry of Livestock, Agriculture and Fisheries
M&E	Monitoring and Evaluation
MSP	Ministry of Public Health
MTSS	Ministry of Labor and Social Welfare
MVOTMA	Ministry of Housing, Territorial Development and Environment
OSE	National Water and Sanitation Company
UCP	Project Coordination Unit
PIF	Project Identification Form (GEF)
PIR	Project Implementation Review
POP	Persistent Organic Pollutant
PPG	Project Preparation Grant (GEF)
PPR	Project Progress Report
PPR	Natural Resources Management Project (MGAP/World Bank)
PRODOC	Project Document
PSC	Project Steering Committee
PY	Project Year
RAP-AL	Latin American Network for Action against Pesticides
RENARE	National Directorate of Renewable Natural Resources
SAICM	Strategic Approach to International Chemicals Management
SNIA	National System of Agricultural Information
TCI	Investment Centre Division (FAO)
TOR	Terms of Reference

UDELAR	University of the Republic (Uruguay)
US$	United States Dollar

1 RELEVANCE

1.1 GENERAL and POLICY CONTEXT

a) General context

Uruguay is an essentially agricultural country, in which the exports of raw materials and manufactured agricultural products represent around 60% of the total value of exports. Agriculture generates approximately 12% of national employment and more than 70% of the employment in rural areas. Around 75% of exports are acquired by highly competitive markets, very sensitive to international standards of quality and safety for products from plant and animal origin. Responsiveness of Uruguay to increasingly stringent international standards regarding food quality and safety has assured the continuity of the strong and successful links of the sector with export markets.

In Uruguay, one of the main environmental aspects related to agricultural activities is the use of agro-chemicals for pest control. The intensification process experienced by the production sector in the last 20 years has been a result of technological innovations, expanding agriculture (especially soybean cultivation) and favorable conditions for the Uruguayan agricultural products on international markets, and has increased pressures on natural resources. This process has been identified as a major factor of environmental degradation. The intensification of primary production has generated a series of negative impacts, which are particularly evident in grain crops and forage production. An example of this is the cultivation of soybeans, where the planted area has increased exponentially from 278.000 hectares in 2005 to more than 1.2 million hectares in 2012. In addition to the negative effects in terms of soil degradation and loss of biodiversity, this phenomenon has also resulted in a substantial increase in the use of chemicals, mainly herbicides, pesticides, and fertilizers, with the consequent negative effects on the environment, and the health of the rural population.

Excluding fertilizers, in 2012 a total of approximately 38,000 tons of pesticides (herbicides, insecticides, fungicides and others) were produced, many of them with high levels of toxicity and eco-toxicity. Until its prohibition, the POP insecticide Endosulfan, and Glyphosate, the most used herbicide in the cultivation of soybeans, have been the main contributors to this increase in consumption since 2005. More recently, the use of atrazine as herbicide on corn and sorghum (both for grain and forage) and 2,4-D to eliminate Glyphosate-resistant weeds have also shown significant increases.

Over 85% of the active ingredients used for pesticide formulation in Uruguay are imported. Table 1 shows the amounts of active ingredients, by types and origin, used in the country in 2012.

Table 1: Active ingredients used for pesticides formulation (by type and origin) Uruguay, 2012 (in Kg.)

Product Type	Imported	Local Formulation	Total	%
Herbicides	12,433,211	2,485,985	14,919,196	78.2
Fungicides	825,374	152,816	978,190	5.1
Insecticides	1,602,025	244,478	1,847,503	9.7
Other	869,269	461,769	1,330,038	7.0
Total	15,729,879	3,345,048	19,074,927	100

Source: Campo Limpio - *Plan de Gestión de Envases y Existencias Obsoletas de Fitosanitarios.* September, 2013

Table 2 shows the breakdown of the top ten products (herbicides, fungicides and others) consumed in the year 2012, sorted according to the amount used and indicating the corresponding categories of toxicity for each.

Table 2: Agro-chemicals consumed in Uruguay, 2012 (by product and toxicity)

Products (P.A.)	Action	Family	Amount Used (Kg,)	Share (%)	Category of Toxicity	Ecotoxicity (EIQ)*
Glyphosate	Herbicide	Aminofos-fonato	11.499.549	60,3	III	35 (low)
2,4-D, dimetilamine	Herbicide	Fenoxi-acético	1.327.364	7,0	II	31 (low)
Atrazine	Herbicide	Triazina	642.129	3,4	III	54 (mediium)
Clorpirifos	Insecticide	Organo-fosforado	586.850	3,1	II, III, IV	73 (high)
Metolaclor	Herbicide	Cloroace-tanilida	314.748	1,7	IV	45 (medium)
Acetoclor	Herbicide	Acetanilida	285.427	1,5	II, III	44 (medium)
Carbendazim	Funguicide	Benzimi-dazol	190.122	1,0	IV	86 (hign)
Mancozeb	Funguicide	Ditio-carbamato	159.835	0,8	III, IV	49 (medium)

Source: Campo Limpio - *Plan de Gestión de Envases y Existencias Obsoletas de Fitosanitarios.* September, 2013

Nota *: EIQ – Environmental Impact Coefficient (Kovach) (ecológical component) (http://nysipm.cornell.edu/publications/eiq/files/EIQ_values_2012herb.pdf)

b) Legal, Policy and Institutional Framework

A relatively robust regulatory and legal framework for pesticides currently exists in Uruguay. The registration, control and sale of chemicals for agricultural use are regulated by Decree 149/1977. Uruguay adopted the General Law for the Protection of the Environment (LGPA) in the year 2000, containing specific articles on chemicals management, which have set the foundations for subsequent decrees. In October 2005, a decree 349/05 was promulgated prohibiting the import, production and use of 9 pesticides included in the Stockholm Convention, as well as preparations or formulations that may contain these ingredients. The Decree 434/2011 governing the

ban on Endosulfan was subsequently adopted, as it had been agreed at the COP-5 of the Stockholm Convention. This Decree prohibits the entrance of Endosulfan in Uruguay, as well as its use for agricultural, industrial, household, health and other purposes, with the exception of research and analysis at laboratory scale.

Most recently, the Government of Uruguay enacted the Decree 152/2013: *Environmentally Appropriate Management of Waste resulting from the Use of Chemical, Biological and other products in Agriculture, Horticultural and Forestry*. This includes containers of chemicals or biological products used in crop or animal production, other elements that have been exposed to active ingredients, and *obsolete* stocks of chemical or biological products, understanding as such "all those that cannot be used for the purposes for which they were manufactured"[5]. The Decree mandates the manufacturers and importers to submit management plans and defines the requirements for such plans with regards to the management of stocks of obsolete pesticides and empty containers.

With regard to the institutional framework, there are a significant number of public and private entities related to pesticides in Uruguay. In the public sector, the main institutions are the Ministry of Livestock, Agriculture and Fisheries (MGAP) through the General Directorate of Agricultural Services (DGSA), and the National Environmental Directorate (DINAMA) of the Ministry of Housing, Territorial Planning and Environment (MVOTMA). The National Institute of Agricultural Research (INIA) carries out research and adaptation of technology, with specific lines of work to improve the use and handling of pesticides.

The **General Directorate of Agricultural Services (DGSA)** has the institutional mandate of pesticides management. Its competence covers the whole agro-chemicals lifecycle, comprising the registration, production, packaging, labeling, marketing, use, as well as the supervision of operators. According to Law 13.640[6], DGSA is responsible for "*the supervision of the materials or products marketed by individuals for agricultural or livestock (production use, in order to) verify the (materials) conditions of sale, composition and destination*". As per the same standard, DGSA is responsible for controlling and regulating the technical conditions that the equipment used for (pesticides application in the) agricultural sector should meet.

In order to meet its mandate, DGSA has the following functions: a) Pesticides Registration and authorization for agricultural use; b) Ban pesticide use when is detrimental to public health; c) Require affidavits of production and stocks of agricultural inputs. Record individuals or legal entities that produce/trade pesticides; d) Authorize companies engaged in aerial or terrestrial application of pesticides, and keep registry; e) Issue a prior authorization to natural or legal persons carrying out pesticide applications; f) Deliver training on pesticides management and safe use - mandatory for the employees of spraying contractors. Outreach and publish relevant information on existing restrictions and prohibitions. Advocate for the safe use and handling of plant protection products; g) Perform enforcement functions through inspections, supervision and fines; h) Determine the procedures for control, certification, and verification for the entry or exit from the national territory of pesticides, fertilizers, biological agents, or any other products of similar nature as determined by MGAP, as

[5] Decree 152/2013, Uruguay.
[6] Article 139. Law enacted on 26 December, 1967.

well as the implementation of these procedures at the points of entry or exit; i) Determine procedures for the risk assessment of pesticides, fertilizers, soil amendments, biological agents and animal feed, as well as for authorizations, records, qualifications, certifications and/or accreditations; j) Establish the technical requirements and controls for the monitoring and disposal of agro-chemicals waste; k) Coordinate actions with the health and environment institutions, and request their intervention, opinion or advice.

The **Ministry of Livestock, Agriculture and Fisheries (MGAP)** is also developing and coordinating the National Plan for Pesticides Waste Surveillance (PVNR) used in agricultural products for both export and domestic consumption. More recently, the Agrochemicals Committee was created in the context of the development of a National System of Agricultural Information (SNIA), with the participation of the General Directorate of Renewable Natural Resources (RENARE-MGAP), the General Directorate of Rural Development (DGDR-MGAP), the General Directorate for Horticulture (DIGEGRA-MGAP), the DGSA, the National Institute of Viticulture (INAVI), and the management unit of the *Agricultural Development and Climate Change Project* (DACC) financed by the World Bank.

The **National Environmental Directorate (DINAMA),** a unit of the MVTOMA**,** was created by Law 16.112 in 1990. According to this Law, DINAMA is responsible for the formulation, implementation, monitoring and evaluation of the environmental protection national plans. It is mandated to implement the national environmental policy. DINAMA is also responsible for the national coordination of the environmental management including *"the environment protection against any effects that may arise from the use and management of chemicals, including compounds, complex natural elements and formulations, as well as the articles containing them, especially those that are considered toxic or dangerous"*[7]*.*

Since 2013, DINAMA is also responsible for the enforcement of sound pesticide and chemical waste management (both containers and obsolete pesticides), as follows: a) Keep a registry of manufacturers, formulators and importers of pesticides; b) Approve plans for environmentally sound management of containers and obsolete stocks; c) Establish minimum conditions to be accomplished by the facilities that store pesticide waste; d) Approve management plans of warehouses for pesticide containers; e) Authorize natural or legal persons to treat/recycle containers and/or decontaminated packaging materials; f) Assess requests of Prior Environmental Authorization (AAP) - from natural or legal persons who process, treat, or dispose contaminated waste and/or obsolete pesticide stocks; g) Establish criteria for the use of recycled materials from pesticide containers, avoiding human or animal risks; h) when no social/economic/environmental alternatives are viable, authorize waste disposal in landfills.

The Decree 152/2013 entrusts DINAMA with the competence of receiving and approving waste containers and obsolete pesticide stock management plans from private and public stakeholders[8]. These plans are currently in different stages of development and implementation. DINAMA is also responsible of issuing sanctions to violations of the mentioned Decree.

[7] Article 2
[8] Article 33, Decree 152/013

The **Ministry of Public Health** (MSP) is the institution responsible for guaranteeing the public health of the population at the national level. As part of its regulatory function, MSP monitors chemicals impacts on human health. It includes research, prevention, and treatment programs related of health problems caused by exposure to agro-chemicals use. As such, MSP works closely with other national and regional institutions, including MGAP, DINAMA, OSE, and departmental governments.

The Government of Uruguay has started some **inter-ministerial initiatives**, in order to enhance coordination on pesticide and chemical management. The Decree 132/011[9] created an Inter-ministerial Task Force under MGAP. Its objective is to assess and harmonize the existing national procedures applied to plant protection products, throughout their lifecycle. The Task Force members are: MGAP (chair), MSP, MVOTMA, the Ministry of Industry Energy and Mining (MIEM), the Ministry of Labor and Social Welfare, the Ministry of Foreign Affairs, and the Ministry of Transport and Public Works. This Task Force is willing to invite the Centre of Toxicological Information and Advice (CIAT)[10], the Congress of Mayors, the Workers Union (PIT-CNT), and private organizations and associations involved in chemical and agricultural production. However, the Task Force has not been very active and not generated any significant action or proposal yet.

Private sector entities involved in the pesticides lifecycle include: the Commerce Chamber of Agrochemical Products (CAMAGRO), and the Association of Chemical Industries of Uruguay (ASIQUR), which are pesticides importers and processors; the recently created *Campo Limpio* Association; and other civil society organizations (CSOs) such as the Uruguayan Network of Environmental NGOs, the Action Network on Pesticides and Alternatives in Latin America (RAPAL), and Vida Silvestre.

Campo Limpio Association is based on a program originally created by CropLife Latin America and implemented in Uruguay since 2005 by the companies dedicated to pesticides marketing, comprising CAMAGRO. *Campo Limpio* aims to develop a sound empty container management from plant protection products, ensuring their responsible handling, storage, disposal and recycling. *Campo Limpio* activities are regulated under the Decree 152/013, which introduced the principle of *extended responsibility:* i.e. the private sector is now responsible for managing agrochemical waste and stocks in the post-consumption stage. In view of this, *Campo Limpio* is one of the stakeholders that is developing a plan for the sound management of pesticides containers and obsoletes – to be submitted to DINAMA.

Since the Project Identification Form (PIF) was submitted by FAO and approved by the GEF CEO in February 2013, the private sector of Uruguay has acquired a new role and related responsibilities in pesticide waste management. Box 1 summarizes the main features of Decree 152/013 regarding the private sector.

[9] Enacted on 2 September 2011
[10] University of the Republic (Uruguay)

Box 1:
Decree 152/2013: *Environmentally Appropriate Management of Waste resulting from the Use of Chemical, Biological and other products in Agriculture, Horticultural and Forestry* (Uruguay, 2013)

Private sector's roles and responsibilities

- Manufacturers, processors or importers are obliged to develop or adhere to a plan approved by DINAMA for environmentally sound management of waste and obsolete stocks of pesticides
- Distributors and retailers are obliged to receive containers of marketed products, and must ensure that they are directed to storage facilities. Distributors and retailers must participate in the dissemination of management plans and guarantee the reduction of obsolete stock.
- Producers and operators of spraying equipment are obliged to decontaminate empty containers and deliver them to storage facilities that are part of an approved management plan.
- Large chemicals spraying operators and consumers are obliged to develop their own waste management plan designed in a similar format as the plan used by manufacturers and importers.
- The delivery of empty containers to operators who are not registered participants in the authorized plans, is prohibited.
- Container management plans should include both decontaminated (*clean* channel) and not decontaminated (*dirty* channel) containers. The plans must also prioritize the recycling and reutilization of containers.
- Decontaminated containers shall be considered as non-hazardous materials.
- Container tracking shall be conducted by both the storage facilities and the companies that carry out processing or treatment of containers

1.2 RATIONALE

a) Issues to be addressed

Although Uruguay has a legal, regulatory and operational framework suitable for the life cycle management of pesticides, there are still a number of important institutional and knowledge barriers that need to be addressed to ensure the environmentally sound management of pesticides in the country.

Pesticide legal and policy framework: The Government of Uruguay has recently developed a strategic policy framework for the agrochemical sector, mainly aimed at harmonizing productive and environmental aspects. The framework also seek to maintain the competitiveness of the Uruguayan products in world markets and ratify its reputation as a "green" producer (*Uruguay Natural*), a feature highly recognized and valued by business partners. As part of this strategy, some public and private initiatives

have implemented in recent years, aimed at improving the legal, regulatory and operational framework related to the use and handling of pesticides in different phases of their lifecycle. Although these valuable initiatives have made important progress, they have remained sectoral and fragmented. Therefore, incremental efforts are required to design and implement an integrated legal and policy approach that includes environmental, technological, operational, production and trade aspects.

Capacity building: In addition, the implementation of the new process of pesticide management (*extended responsibility*) involving the private sector represents a major challenge that requires the strengthening of capacities of both private and public institutions.

Information Exchange and Inter-institutional Coordination: One of the main obstacles hindering a sound pesticide management is the weak information-sharing and coordination mechanism between the relevant institutions. Recently, the contamination of some environmental matrices caused the death of fish, animals and bees, but limited information or insufficient evidence has prevented the coordination of effective actions and responses among the involved ministries. Pesticides information remains disperse and fragmented throughout the national agencies.

Pesticide Importation: There are deficiencies in the legal tools for regulation of pesticides. For example, the Decree 149/977 applies only to imported pesticides for sale, and does not apply to pesticides imported directly by the final consumer.

Obsolete Pesticides Stocks: The most recent formal inventory of stockpiles of POPs pesticides was conducted in 2005 as part of the preparation of the National Implementation Plan (NIP) for the Stockholm Convention. The exercise revealed that there were about 20 tons of obsolete pesticides, including POPs, mostly stored in public institutions. This information is considered highly unreliable and incomplete; demonstrating that one of the constraints in the management of pesticides throughout their lifecycle is the lack of reliable information. Currently, DINAMA estimates that the inventory of obsolete pesticides including POPs amounts about 300 tons, of which a large proportion is highly fragmented and disseminated in the hands of the private sector (producers, suppliers and contractors).
The destruction of obsolete pesticides in Uruguay requires a set of specific tools for identifying small amounts of pesticides stored by farmers and spraying contractors, and proceeding to their final disposal.

Contaminated sites: There is a lack of reliable information about the magnitude of contaminated sites, whether soil or water bodies, in rural areas. During the NIP preparation (2005), 52 potentially contaminated sites with POP pesticides were identified. In 2006 a DINAMA/JICA[11] project detected concentrations of methyl-parathion in water, despite this pesticide had been banned. The National Water and Sanitation Company (OSE) also identified toxic organic chemical residues, mainly pesticides and metabolites (DDT, Endrin, Glyphosate, benzene, atrazine) in waterways. As a result, OSE had to adjust its water purification process in recent years.

[11] The Japanese International Cooperation Agency (JICA).

Management of empty pesticide containers: As a result of the increased use of pesticides, it is estimated that empty containers generate more than 2,200 tons of waste per year, of which more than 95% corresponds to plastic containers, and the remaining 5% to contaminated containers made of metal, glass, cardboard and plastic bags. While public and private initiatives in recent years have encouraged the collection, processing and recycling of pesticide containers, currently the proportion that is recycled in Uruguay does not exceed 10% of the marketed products. The remaining 90% is buried or informally burned, and in some cases reused as feeders and troughs for animals, and even storage of water for human consumption in remote areas.

Alternatives to current pesticide use and handling, and Integrated Pest Management (IPM): The intensification in production (more planted areas and yields) has caused an exponential increase in the use of fertilizers and pesticides in Uruguay. This process has been led by the expansion of soybean production. In addition, the lack of knowledge and adoption of alternatives to current pest control methods has further intensified the use of agrochemicals in the rural sector in the last decade. IPM practices have not been properly promoted. With the gradual elimination of Endosulfan, and the growing emergence of weeds and insects resistant to conventional products, there is an urgent need to developing, identifying, testing and promoting practices and alternatives that contribute to reducing the consumption and/or impact of pesticides.

Environmental monitoring and pesticides risk management: Although pesticide handling and use have improved in the last years, some agrochemicals with high eco-toxicity levels are still used in specific crop production. The impacts of this agrochemical use on human health and natural resources have not been properly assessed yet. National agencies have limited capacities or resources to monitor or control related risks events. Uruguay needs to establish efficient operational and analytical instruments for pesticides monitoring in environmental matrices, including soil and water in agricultural areas. Collaboration between relevant institutions needs to be improved to overcome the frequently isolated and uncoordinated actions.

b) Baseline and co-financing initiatives

A number of public and private initiatives in Uruguay seeks to improve the knowledge and reduce the potential impacts of pesticides during their life cycle. These baseline initiatives are rather being developed or in early implementation phase. Thus, they are expected to be coordinated and/or associated with the proposed project:

FAO is implementing regional and national projects related to this proposed project, as follows:

- *Strengthening the knowledge and the development of instruments for territorial management* (TCP/URU/3401, 11/X/URU/212), Uruguay. The TCP Project aims to improve the organizational process, build consensus for occupation and administration for the use of land in rural areas contributing to natural resources management and maximizing social benefits according to the rural soils categories. This project is being implemented in the biennium 2013/2014. It will provide baseline data on the organizational process, land occupation, and administration in rural areas. The baseline data will contribute to natural

resources management and maximizing social benefits according to the rural soils categories.

- *Systematization of the management of food safety in the Ministry of Livestock, Agriculture and Fisheries (MGAP)* (TCP/URU/3402, 11/VII/URU/213), Uruguay. The project's objective is to improve inspection capacities and laboratory control, to implement food safety management procedures and reduce risks. This is to improve standards and support international marketing capacities in the MERCOSUR countries. This TCP project is being implemented in the biennium 2013/2014, and will significantly strengthen the analytical capacities, procedures, and monitoring based on risk evaluation of food safety. This includes the analysis of pesticides residues particularly in agricultural products. This will help sound pesticide management.

- *Strengthening national capacities in biosafety of GM crops for sustainable agricultural production* (TCP/URU/3403, 13/VII/URU/2149), Uruguay. The overall TCP project's objective is to promote the strengthening of national capacities in biotechnology and biosafety for sustainable agriculture production. The project will contribute to the development of regulations; institutionalize capacities for laboratory analysis, experimental analysis and development of risk assessment protocols. The TCP project will provide technical personnel with state of the art tools for genetically modified organisms, coexistence and pest management in areas of convergence between GM crops and conventional agricultural systems. The TCP project will also promote the interaction of technical personnel and GM producers and conventional agricultural systems. It is expected that the adoption of biosafety rules will improve pesticide management and reduce its use.

DINAMA/MVOTMA: DINAMA is implementing Decree 152/013, which includes the enhanced management of containers and obsolete pesticides. DINAMA has dedicated technical and managerial staff that review, approve and monitor the management plans of *Campo Limpio* and other private sector stakeholders, as well as the compliance of importers and manufacturers to the approved plans. Together with the National Customs Directorate, DINAMA manages the control of pesticide imports (both raw materials and formulated products). DINAMA responds to complaints linked to pesticides through its inspectors and/or coordinates responses with local authorities. DINAMA is preparing an agreed operational solution for empty containers management along with *Campo Limpio.*

DINAMA is investing resources through its Environmental Laboratory Division to monitoring pesticides in environmental matrices. The Laboratory is now able to analyze chlorinated pesticides in water (Aldrin, Dieldrin, Endrin, heptachlor, Heptachlor epoxide, lindane), Endosulfan (alpha, beta, sulfate, p, p´DDT, p, p´DDE, p, p´DDD, Metoxiclor), and is currently expanding its capacity to detect triazines and phosphorous-based pesticides (atrazine, Desetilatrazina, Desisopropilatrazina, déséthyl 2 hidroxiatrazina, simazine - Ethion, Malathion, parathion, Parationmetil, chlorpyrifos, Diazinon) in water. These parameters are incorporated into the monitoring of water quality.

Additionally, DINAMA is leading a Inter-institutional Plan to Improve Water Quality in Strategic Watersheds, mainly in the basin of the Santa Lucia River, which supplies

drinking water to Montevideo. The Plan places emphasis on the reduction of nutrients from point and diffuse sources in water courses. It is also expected to study and eventually incorporate actions related to the use of agro-chemicals, including pesticides.

MGAP: The DGSA is enforcing measures to enhance pesticides registration. They include improved controls for imported products, and the development of laboratory techniques for analysis of products and concentrations.

MGAP is investing resources in the development of the new Agricultural Information System (SNIA), including the recent creation of a Committee of Agricultural Chemicals. Through these actions, MGAP aims at improving information-sharing and coordination among the agencies of the ministry.

MGAP also expects to improve knowledge and public instruments linked to agrochemicals through the recently-created Soil Use and Management Plans being implemented by RENARE, and the development of specific information layers on pesticides in the SNIA. The latter are being advanced by the *Agricultural Development and Climate Change Project* and the Earth Institute of Columbia University.

At field level, MGAP is implementing the Program for Real Time Monitoring of Aerial and Terrestrial Sprayers, and the Comprehensive Program to Reduce the Environmental Impact of Atrazine, both led by DGSA with the aim of improving the use and handling of pesticides.

Other units within MGAP that are promoting initiatives related to pesticides use and management include the Directorate-General of Rural Development through the small farmers innovation project with the support of the IDB, the General Directorate of Horticulture (DIGEGRA), the National Institute of viticulture (INAVI) and the National Dairy Institute (INALE), all members of the Committee of Agricultural Chemicals promoting reduced use of chemicals in their respective sectors. In addition, the National Institute of Agricultural Research (INIA) allocates considerable resources to conduct pesticide-related applied research and outreach programs.

National Water and Sanitation Company (OSE): in response to the impact of agricultural intensification and the increased use of pesticides, OSE is developing a Plan for the Expansion and Improvement of the Environmental Monitoring of Pesticides (primarily Endosulfan, Glyphosate, atrazine, and ethyl and methyl-parathion) in several strategic waterways (Rio Negro, Rio Santa Lucia, and Laguna del Sauce). Water samples are analyzed in areas near intake and treatment stations to ensure compliance with drinking water standards. However, testing does not still include sampling of sediments, soil, and other water bodies (rivers and lakes) that do not provide drinking water.

Private sector: The commitment of the private sector to help reduce the negative impacts of pesticides has been channeled mainly through the creation and operation of the *Campo Limpio*, a non-profit institution originally sponsored by the CAMAGRO. *Campo Limpio* has assumed the responsibility of treating, collecting and processing empty pesticides containers in order to maximize the volume of material for recycling, as well as the proper management of obsolete pesticides stocks.

Other relevant private sector initiatives originate from companies such as ALUR and RMK Timberland Group, or private organizations as the Technological Bureau of Oilseeds who are supporting the implementation of integrated pest management (IPM) programs, including the identification of alternatives to Endosulfan; and the Uruguayan

Tillage Association (AUSID), which is the entity promoting conservation tillage in Uruguay.

c) Incremental cost reasoning

Baseline initiatives described above encompass a broad spectrum of policy, institutional, technical and operational actions. However, some remaining barriers are blocking the sound pesticide management with a life cycle approach in Uruguay, as follows: i) weak coordination among ministries, other public agencies and the private sector for the reduction of obsolete pesticide stocks and disposal of empty containers; ii) deficient capacity-building programs; iii) incompleteness of the new regulatory framework implementation; iv) lack of awareness on Integrated Pest Management practices at field level; v) weak coordination on environmental monitoring and pesticide risk management.

GEF incremental funding will help overcome those barriers by supporting: (i) the implementation of the new legal and regulatory framework which assigns increased responsibility to the private sector in support of the lifecycle pesticide management; (ii) the harmonization of tools and procedures to incorporate environmental risk assessment (ERA) in the agro-chemical registration; (iii) the development of a territorial approach for pesticides management by using innovative methods (i.e. information systems and real time geo-referenced monitoring); and (iv) the coordinated implementation of the DINAMA-approved action plans for pesticides use and management; (v) the strengthening of stakeholders involved in the empty containers management, including national and local institutions, industrial and commercial actors, farmers and civil society.

1.3 FAO's COMPARATIVE ADVANTAGE

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

Since 1994, FAO has operated the FAO Obsolete Pesticides Programme, a global programme for the prevention and elimination of obsolete pesticides, developing and assisting in the implementation of many national and regional projects. Based on practical field experience, the programme aims to raise awareness, provide technical advice and guidance on obsolete pesticide prevention and elimination. FAO has developed and refined training packages and tools for inventory, risk assessment and risk management of pesticides.

For over three decades, FAO has provided guidance on Integrated Pest Management (IPM) to reduce reliance on chemical pesticides. IPM is an ecosystem approach to crop production and protection that combines different management strategies and practices to grow healthy crops and minimize the use of pesticides. IPM increases the

sustainability of farming systems and improves ecological sustainability, as it relies primarily on the enhancement of ecosystem services. In addition, FAO has a vast experience in providing technical assistance in pesticide legislation and regulatory aspects in countries to meet international standards. FAO promotes the International Code of Conduct on Pesticides Management for public and private entities working on production, regulation and management of pesticides. The Code provides standards of conduct and serves as a point of reference in relation to sound pesticide life cycle management practices, in particular for government authorities and the pesticide industry. The Code is supported by technical guidelines for its implementation, including guidelines for policy development, registration and labelling, environmental criteria, and biological control. FAO also supports countries on the enforcement of laws and regulation of pesticides use, distribution and sale, use and equipment, disposal of obsolete stocks, and monitoring and observance of the Code of Conduct.

The FAO's Regional Office for Latin America and the Caribbean (FAO RLC, Santiago, Chile) will provide technical backstopping to project implementation through its technical staff, mainly specialists in plant production and protection. The Plant Production and Protection Division (Agriculture and Consumer Protection Department) at FAO Headquarters in Rome will also provide additional technical assistance. FAO RLC Office has a long history of projects related to integrated pest management, use of bio-pesticides, and the sustainable intensification of agricultural production. FAO RLC Office works in close collaboration with FAO Sub-regional Offices in Barbados and Panama, where two additional Crop Production and Protection area stationed. Through past and current projects FAO provides inventory plant pest and disease databases, and reference collections within the region. FAO RLC's actions aim to improve integrated pest management and reduce dependence on pesticides in Latin America and the Caribbean.

The FAO's Representation in Uruguay has a long record of cooperation with the Government in plant production and protection. It has also the staff capacity to support project implementation through an Administration-Finance Officer, a Programme Officer, and the FAO Resident Representative.

Regarding investments FAO has a long track record in investment projects. Through the Investment Centre Division (TCI) and its more than 40 investment officers FAO is supporting the development, implementation and supervision of investment projects in agriculture and forestry. The FAO-GEF Coordination Unit is based in TCI to ensure the integration of this expertise in the design and supervision of GEF projects, which include technical assistance as well as investments. The mission of TCI is to provide developing countries with technical assistance to identify and formulate investment strategies and operations for external financing, including environmental and natural resources management projects. The FAO-GEF Unit specialists in technical assistance and investment project design and implementation provided guidance for the development of this project and will have a key role in support of project implementation.

1.4 PARTICIPANTS AND OTHER STAKEHOLDERS

A number of public and private entities, including trade, commercial, producer organizations and NGOs, are closely associated with the management of the lifecycle of

pesticides in Uruguay. The successful implementation of this project foresees their participation. Table 3 describes the mission and roles of the involved stakeholders.

Table 3: Project Stakeholders, mission and roles

STAKEHOLDER	MISSION	ROLE IN THE PROJECT
National Directorate of Environment (DINAMA) (MVTOMA)	Implement integrated environmental management in all the activities in Uruguay, including watersheds.	Leading national partner. Coordinate project implementation and project management along with the GEF Agency (FAO). Ensure the close collaboration with other ministries and participating entities.
General Directorate of Agricultural Services (DGSA) (including laboratories) (MGAP)	Organize, develop and execute policies related to the registration, use and management of pesticides for production purposes.	Support project implementation, in close collaboration with DINAMA, FAO, other ministries and participating entities.
General Directorate of Renewable Natural Resources (RENARE) (MGAP)	Promote sustainable soil management and use in production chains. Foster the improvement of water management in production systems.	Support project implementation, in close collaboration with DINAMA, FAO, other ministries and participating entities.
Ministry of Public Health (MSP)	Ensure population's public health in Uruguay.	Support project implementation by providing inputs and expertise on health issues and aspects.
Ministry of Labour and Social Security (MTSS)	Implement policies and ensure respect for labour and social security regulations and agreements.	Support project by providing inputs and expertise on occupational health aspects.
National Water and Sanitation Company (OSE)	Manage facilities of drinking water supply, guarantee water safety and quality.	Support the implementation of project activities related to the use of pesticides in drinking water basins. Participate in the development of activities related to water pollution control.
Other MGAP's agencies and projects (General Directorate of Horticulture - DIGEGRA, National Institute of Agricultural Research -INIA, National Dairy Institute-INALE, National Viticulture Institute -INAVI, SNIA, DACC).	Generation and dissemination of information and technologies.	Participate in project implementation by providing inputs and experiences on the adaptation and adoption of technologies related to the rational use of pesticides at general and sector level.
Commerce Chamber of Agrochemical Products **(CAMAGRO)** **Asociación Civil *Campo Limpio***	Represent the companies involved in the manufacture, formulation, import or trade of phytosanitary products. Establish relations with public and private organizations, at national or international level, which	Participate in project activities related to the management of empty pesticide containers, and the elimination of obsolete pesticides stocks.

Other recycling companies	promote the responsible and effective use of agrochemicals.	
Latin American Network for Action against Pesticides (RAPAL) Network of Environmental NGOs	Civil society organizations aimed at promoting viable alternatives for the development of socially just, ecologically sustainable and economically viable agriculture.	Participate in project implementation with specific contributions to the role of civil society in the use and sound management of pesticides.
Federation of Trade Unions of Workers (PIT-CNT)	Defense of civil liberties and economic demands, social and labor rights of workers in urban and rural areas.	To support the implementation of the project activities related to the training of rural workers in practices of use and handling of pesticides.
Private Companies: **RMK, ALUR, AUSID and Oilseeds Technological Bureau**		To support the implementation of the project activities related to IPM.
Rural communities, producers and their organizations		Beneficiaries of the project. Contribution to the management of empty containers. Beneficiaries of technical assistance, training and awareness-raising project activities.

Source: Based on the analysis developed by the project preparation team.

The specific institutional arrangements for project implementation, including the role of FAO as implementing agency, are described in greater detail in sections 4.1 and 4.2.

1.5 LESSONS LEARNED FROM PAST and RELATED WORK

The proposed project is based on lessons learned and experiences gained in the implementation of programs and projects in Uruguay and by FAO worldwide, as well as projects supported by GEF in other countries and regions.

With regard to institutional aspects and policy, national and international experiences emphasize the need for a comprehensive approach that includes an integrated management of the lifecycle of pesticides, and to strengthen inter-agency cooperation at the national and local levels, as well as with the private sector. Likewise, international experience highlights the importance of quantifying the economic impacts of inappropriate management and handling of pesticides.

The project “Assistance for Buidling an Environmental Assessment System that strengthens the Registration of Phytosanitary Products", financed by Japan through JICA between 2008 and 2011, indicated how the registration of pesticides should be carried out, the advisable laboratory techniques to measure concentrations of pesticides in water, how to quantify surface runoff, and the evaluation of pesticide drift. These findings are considered in the present project.

In terms of management of pesticide containers, between 2007 and 2011, the "Responsible Production Project" (PPR) implemented by MGAP with financing from the World Bank, supported the construction of seven pesticide container collection centers that were managed by local governments and farmer organizations under the supervision of DINAMA. This pilot initiative demonstrated the importance of the proper treatment of containers by the farmers and contractors, of the strategic geographical location of collection, and the appropriate commitment and knowledge of the lifecycle of pesticides by the staff and administrators of the collection centers.

The PPR project also funded a series of sub-projects with the aim of promoting the use of the thermal control of soil pests ("solarization") for substitution of pesticides in intensive horticulture, which showed the critical need to complement the promotion of demonstrative technologies in field activities with training for producers and their organizations in all aspects of the use and handling of pesticides.

Rice cultivation in Uruguay has been a pioneer in the sound management of pesticides and has generated important lessons in terms of instruments and good practices. The Rice Growers Association and the rice processing industry currently promote and require strict adherence to the use and sound management of pesticides based on tested and validated techniques. Through this support, rice producers base their agronomic crop management in a manual of "Good agricultural practices" that prioritizes the responsible and sustainable management of natural resources.

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

a) Alignment with National Development Goals and UNDAF Priorities

This project is consistent with the priorities set in Uruguay's Agricultural Policy Strategy, which is focused on promoting: i) Uruguay's competitiveness in the international agricultural sector; ii) sustainable intensification of rural production; iii) adaptation to climate change; iv) rural development and differentiated policies for family farming, and v) articulation and institutional strengthening. This project is particularly relevant to achieving sustainable intensification.

This project is also in line with the priorities set in Uruguay's UNDAF 2011-2015 particularly the Priority Area 2: *To move towards more sustainable development models considering natural resources and ecosystems conservation, mitigation and adaptation to climate change as well as the use of renewable energies.*

b) Alignment to the Stockholm Convention National Implementation Plan (NIP)

The Government of Uruguay ratified the Stockholm Convention on Persistent Organic Pollutants on February 9, 2004. In May 2006, the Government submitted its National Implementation Plan (NIP) to the Secretariat of the Stockholm Convention. This NIP describes the actions that the country plans to implement in order to comply with its obligations under the Convention. This includes the gradual elimination of POPs, and the remediation of sites contaminated by pesticides.

The proposed project is consistent with and will contribute to addressing the following priorities identified in the NIP:

- Assess the weaknesses in pesticides management that lead to pesticide residues generation. Develop proposals to address those weaknesses;
- Support the registration of chemical substances through the establishment of an specific information system;
- Develop legal tools for regulating the entire pesticide lifecycle, including environmental and human health aspects;
- Develop tools for monitoring the impacts of pesticides on human health and the environment;
- Establish a system of environmentally sound management of empty pesticide containers;
- Improve communication and coordination mechanisms between governmental and non-governmental stakeholders;
- Establish mechanisms to eliminate stockpiles of obsolete pesticides.

c) Alignment with GEF focal area

The project contributes to the implementation of the GEF-5 Chemicals Strategy. It focuses on CHEM-1, through the safe disposal of obsolete pesticides including POPs, and remediation of possible contaminated sites in Uruguay. It will also focus on capacity-building to strengthen the management of the lifecycle of pesticides in order to prevent future accumulation of obsolete products, promote the proper management and disposal of containers, and minimize the risks to human health and the environment.

d) Alignment with FAO Strategic Framework and Objectives

This project is aligned with FAO's Strategic Objective 2 (SO2) "*Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner*", and Organization Outcome 2 "*Stakeholders in member countries strengthen governance – the policies, laws, management frameworks and institutions that are needed to support producers and resource managers – in the transition to sustainable agricultural sector production systems*".

The project is also consistent with regional priorities agreed in the 33rd Latin America and the Caribbean FAO Regional Conference (FAO LARC), in line with FAO's SO2: "*increasing production efficiency and adoption of good practices for sustainable agriculture; improving governance mechanism and supporting decision-making for sustainable development (social, economic and environmental)*"(through the Regional Initiative) on "*Family Farming and Rural Territorial Development*"[12].

The project is also consistent with the FAO Country Programme Framework (CPF), in particular the Priority Area 4: *To maintain and improve plant and animal safety status in the country; (and to support the) institutional strengthening of the Ministry of Livestock, Agriculture and Fishery in the design and implementation of policies and inter-institutional coordination*[13].

[12] FAO Regional Conference for Latin America and the Caribbean (33rd LARC, 2014), Priorities for FAO Activities in the Region 2014-17. See: http://www.fao.org/docrep/meeting/030/mk075e.pdf

[13] The Priority area's objective is to promote the adequate use of pesticides and agricultural agrochemicals in general, among others. Source: Country Programming Framework FAO/Uruguay 2011-2015:

e) Alignment with FAO's Major Areas of Work (MAWs)

The project aims to promote *Doing More with Less*: *Sustainable Intensification of Agriculture* by testing and improving agricultural practices in soybeans and other summer crops, fruits and vegetables, and annual forage crops used in dairy production. Special emphasis will be placed in building the capacity of farmers to conserve ecosystem services such as biological control to prevent the misuse of pesticides and on testing conservation agriculture to increase productivity.

ftp://ftp.fao.org/osd/CPF/Country%20NMTPF/Uruguay/Status/Final_CPF%20Uruguay%202011%202015.pdf

2 PROJECT FRAMEWORK AND EXPECTED RESULTS

2.1. PROJECT STRATEGY

The proposed project strategy is supported on three pillars: (i) the NIP priorities in the framework of the Stockholm Convention (see section 1.6), (ii) the overall objectives of the GEF, and (iii) the needs and features of Uruguay to face the environmental risks caused by an explosive intensification of agricultural production. As such, the project design gives priority attention to the risks posed by the misuse of pesticides, the existence of contaminated sites and obsolete pesticides, and the safe elimination of used pesticide containers. The project's strategy is to address these priorities through the integrated and sustainable management of all phases of the pesticide lifecycle.

The project is based on a solid normative, institutional and technical baseline, and includes lessons learned from local and international initiatives related to the proper management of pesticides. As such, the project is designed to be complementary to existing activities at the national level, and aims to make incremental contributions to the updating, modernization and effective implementation of the instruments associated with the management of pesticides in Uruguay.

2.2. PROJECT OBJECTIVES

The project objectives are: to safely dispose obsolete pesticides including POPs and containers, and to strengthen the lifecycle management of pesticides in Uruguay.

The project will contribute to the overall objective of the Strategic Approach to International Chemicals Management (SAICM) to achieve the sound management of chemicals throughout their lifecycle in order to reduce the adverse effects of pesticides on human health and the environment.

2.3. PROJECT COMPONENTS

With the incremental financing of the GEF, the project will be implemented through the following components, including their outcomes and outputs:

Component 1: Reduction of stocks and elimination of obsolete pesticides and containers

The objectives of Component 1 are to: (i) strengthen the capacities of DINAMA, MGAP and *Campo Limpio* for the environmentally sound management of obsolete pesticides, including POPs and associated waste; (ii) eliminate obsolete stocks of pesticides and rehabilitate priority contaminated sites to reduce risks to human health and the environment; and (iii) achieve an effective management of used containers, through adequate treatment, storage, and recycling.

In relative terms, the volumes of obsolete pesticides in Uruguay are low. The majority of these products are highly dispersed throughout the country, stored in warehouses of distributors, contractors, and farmers, requiring considerable resources for their location, identification and destruction. For this reason, in PY1 the project will support the training of private partners in methodologies for planning and conducting field

inventories. This is necessary to establish the amount of POPs and other existing obsolete pesticides at field level. These enhanced inventories will allow for the preparation of environmental management plans (to be submitted to DINAMA[14]) which include strategies for safeguarding and eliminating newly identified stocks.

The intensification of agricultural and livestock production has resulted in a substantial increase of pesticide containers. Concrete and innovative initiatives to address this situation have been identified. The Government of Uruguay requires additional resources to remove existing barriers of knowledge, logistics and operational elements, and to support the recently initiated process of transferring responsibilities to the private sector. Improved information and training, and internationally recognized good practices to develop and implement management plans, need to be disseminate for a sound management of obsolete pesticides and disposal of containers.

The work plan of Component 1 is fully detailed in Appendix 2 of this Project Document.

<u>Outcome 1.1</u>: Risks to human health and the environment reduced through safe disposal of POPs and other obsolete pesticides, and through built capacities on remediation of pesticide-contaminated soil

Output 1.1.1 MGAP and DINAMA trainers trained in inventory planning, safeguarding and safe storage of hazardous waste, and environmental assessment of contaminated sites.

In PY1 a tailored-made training will be delivered to 10 trainers from MGAP and DINAMA. Capacity-building program will cover hazardous waste inventory planning, safeguarding, storage, national and international transport, as well as the environmental assessment of contaminated sites. Trainers will be selected among MGAP's and DINAMA's permanent staff that are already focused on pesticides registration, management and monitoring. In this way, key institutional capacities will be strengthened.

Output 1.1.2 Staff of DINAMA, MGAP, Faculty of Agronomy (FAGRO)[15] and local governments trained in obsolete pesticides and contaminated sites

In PY2, at least 70 technical officers of DINAMA, MGAP, FAGRO and local governments, will be trained by the 10 trainers (see output 1.1.1). The training will include guidelines on how to supervise, conduct inventories, safeguard, and storage obsolete pesticides at field level, and how to identify contaminated sites and report them to the competent agency.

Output 1.1.3 Completed inventory of obsolete pesticide stocks, including POPs, completed.

In PY1, DINAMA's UCP, assisted by Campo Limpio and a qualified contracted institution, will develop a Master Plan (MP) for the identification and management of obsolete pesticide stocks. The MP will define procedures, roles and responsibilities for the identification, collection and final disposal of existing pesticides, the mechanisms to

[14] See the description of Decree 152/013 in Section 1 of this Project Document.
[15] University of the Republic (Uruguay).

ensure the effective reporting of public and private inventories, and to avoid the accumulation of stocks in the future. Starting in PY2, a system for periodic identification and updating of obsolete stocks will be developed, tested and implemented.

Output 1.1.4: Strengthened capacity of the private sector for the elimination of obsolete pesticides, including POPs, and empty containers

This output will support a comprehensive training program for the staff and managers of *Campo Limpio* focused on the elimination of obsolete pesticides, the management of containers and contaminated sites. Approximately 80 professionals and operators of the 12 existing and new collection centers will receive training.

Co-financing will be provided by the private sector through *Campo Limpio*, which will cover most of the cost of removal of the estimated 160 tons of obsolete pesticides, including POPs.

As part of this comprehensive approach to private sector strengthening, PY1, PY2 and PY3 an estimated 30 members of producer and agrochemical business organizations will in be trained in all phases of obsolete pesticide management, including identification, handling, treatment and packaging. Training will include topics as inventories, disposal, safety, storage, registration, record keeping, calibration, and measures to better estimate pesticide needs.

Output 1.1.5 Empty container management strengthened extending the network of collection centres and recycling facilities.

In PY1 and PY2, the preparation and implementation of empty container management plans will be supported. These plans will allow the treatment and recycling of around 1.100 tons of empty pesticides containers, equivalent to 50% of the total generated annually by farmers throughout the country. The PPR-World Bank project created in 2007 a pilot program for container management, which will be strengthened by this GEF project. The existing network of collection centers will be expanded, increasing its operational capacity. Eight (8) collection centers will be modernized, and four (4) additional centers will be established and strategically located in critical watersheds.

<u>Outcome 1.2:</u> Capacities developed for site remediation, implemented

Output 1.2.1: Guidelines for private sector, including specific site remediation proposals

In PY1, a the technical coordinator of the UCP will develop guidelines for the private sector. The guidelines will address the identification and remediation of contaminated sites mainly by farmers, pesticide producers and suppliers. In PY2, the guidelines principles will be incorporated in the training modules used by technical assistance providers, extension officers. *Campo Limpio* will also disseminate the guidelines and modules among both its members, and the network of container collection centers (see output 1.1.5).

Component 2: Strengthening the legal framework and institutional capacity for the rational and integral management of pesticides throughout their lifecycle

The regulation has several decrees on the environmental aspect, as described in the Section 1 (e.g. Decree 152/2013 and LPGA). Component 2 aims at improving the current registration process of pesticides, mainly by incorporating environmental risk assessment (ERA) tools and criteria. In addition, it will support the strengthening of capacities of the institutions responsible for lifecycle pesticide management, in the context of the re-activation of the inter-ministerial group created by Decree 132/11.

In PY1, a legal expert will develop a report that collect, unify and update the decrees/laws, including a database of banned chemicals (both for use and marketing). On this basis, a comprehensive guide to regulate national marketing and imports will be developed in PY2 and proposed to decision-makers for strengthening the legal framework. Pesticides regulations are expected to be improved in PY3.

The work plan of Component 2 is fully detailed in Appendix 2 of this Project Document.

<u>Outcome 2.1:</u> Legislative and regulatory framework for the environmentally sound management of POPs and pesticides is improved

Output 2.1.1 Pesticides regulations reviewed and updated

In PY1, the Legal Expert will conduct a thorough review of the existing legislation and identify weaknesses, areas for improvement, and experiences from other countries which could contribute to the development of a proposal for improved norms and legislation for pesticides. The proposal will be subject to broad reviews and consultations among all relevant stakeholders from the public and private sectors.

Output 2.1.2: Current pesticides registration and authorization system assessed, gaps and capacity building needs identified and measures to address these implemented

In coordination with the DGSA's management and staff, in PY1 a qualified international consultant will conduct a review of the current pesticides registration system, and will identify measures for improving the registration of all pesticides. The review will propose how to concretely incorporate the environmental risk assessment (ERA) requirements in the registration process[16]. Institutional capacity building needs will also be identified and measures will be proposed.

In PY2 and PY3 the improvements proposed by the review will be implemented and monitored.

Output 2.1.3 ERA models included in the training of institutions

In PY2, DINAMA, MGAP, and other public sector representatives and researchers will be trained in how to apply ERA tools in the pesticides registration process, and how to use predictive models. DINAMA and MGAP will bring cash and in-kind co-financing to the project through a team of dedicated trainers that will produce a comprehensive training program based on the methodology *Training-of-trainers*. This team will be responsible for delivering the courses to institutions involved in ERA applications, including DINAMA, DGSA, INIA and other public and private institutions.

[16] At present, the registry of imported pesticides does not apply the ERA in Uruguay.

Output 2.1.4: Adoption of Environmental Risk Assessment (ERA) tools to support pesticides registration

In PY3, the following actions will be supported: (i) Incorporation of ERA models in the methodology of registration and recording of pesticides; (ii) Adding parameters of eco-toxicity from ERA models to the registration of pesticides; and (iii) Use of ERA models as support to the monitoring of demonstration farms and plots (linked to Component 3).

Output 2.1.5: ERA performed to assess at least 3 highly used active ingredients

In PY2, technical assistance will be delivered to targeted institutions and private sector actors to support the application of ERA tools, and assess at least 3 of the most widely used active ingredients in pesticides.

Output 2.1.6 Improved pesticides information system

Activities under this output are: (i) in PY2, the development and initial operation of a national database on registered and banned pesticides, import, distribution and use, with information publicly accessible to all stakeholders; and (ii) in PY3 and PY4, a comprehensive outreach strategy to ensure the dissemination and adoption of the new pesticide registration procedures, and the use of ERA and other improved tools. The strategy will involve publications, brochures, communication campaigns and training. It will count on the active participation of the network of distributors, suppliers, and the network of container collection centers.

Component 3: Promoting Integrated Pest Management (IPM), pesticide sound use and management, and other alternative to hazardous pesticides, through demonstration units

Component 3 will help overcome the technological and knowledge barriers present among agro-chemical users and technicians at field level. The component is aimed at promoting the adoption of IPM, as well as other practices of sound agro-chemicals management in the main crops, including soybeans and other summer crops, fruits and vegetables, and annual forage crops used in dairy production. The component's comprehensive strategy will include agro-chemical transportation, storage, selection, dosage and application, as well as waste handling and disposal.

The adoption of good practices will be promoted through a network of (at least) six demonstration units. The units will also serve as reference areas for measuring comparative results between field practices. They will complement training, awareness-raising and motivation campaigns addressing rural producers, technicians and urban population on feasibility and positive impacts of adopting a rational use of pesticides.

Among others, the training events will include the establishment and dissemination of bio-beds as an innovative technology to reduce point pesticide contamination such as accidental spillages during mixing, filling and cleaning sprayer tanks. These activities have been identified as a major contamination risk, mainly in watersheds and rivers. A bio-bed is a simple and cheap bio-purification system that has been used successfully in

the reduction of point source contamination by pesticides. The technique has been documented in several countries around the world. The main component of the bio-bed is the bio-mixture, which provides a surface for pesticide binding and subsequent degradation. The bio-mixture is primary composed of soil, peat and straw in volumetric portions. The composition can be adapted to locally available materials. The bio-mixture has a high biological catalytic activity for pesticide degradation. Specifically the straw allows the development of white rot fungi, which promote pesticide degradation. Currently Guatemala and Chile have adopted the technology. A national training plan will be developed bases on the pilot plots. Lessons learned will be systematized in a technical document to be published in collaboration with national and international partners.

The implementation of this component, including results dissemination, will require joint efforts and coordination between DINAMA and relevant MGAP agencies (DGSA, RENARE, DIGEGRA, INAVI, INIA), complemented by specific contributions from *Campo Limpio*, NGOs, producer organizations, local governments and private companies. Component 3 will complement MGAP's baseline initiatives (i.e. the programs led by the General Directorate of Rural Development, and the DACC-World Bank project), and will generate valuable information for the National Agricultural Information System (SNIA) and the Santa Lucia River Basin Environmental Management Plan.

The work plan of Component 3 is fully detailed in Appendix 2 of this Project Document.

Outcome 3.1: **The use of toxic pesticides reduced through the adoption of IPM and other alternatives (*50 tons/year reduction in use*)**

Output 3.1.1: IPM strategies and other alternatives for priority crops, developed and field tested

In PY1, a comprehensive stocktaking exercise will be conducted, by analysing: i) current practices being applied in all relevant commercial and smallholder crops and forestry production, ii) the status of national and international research on improved techniques, inputs and practices for crop production; and iii) the technical and financial viability of these options. As a result, an improved IPM strategy, with specific technological alternatives, will be developed in PY1.

In PY1 (1st semester) six (6) demonstration farms or plots will be selected, through a broad consultation process. Selection criteria will include:

- Geographical area: farms located in priority watersheds or micro-watersheds;
- High use of pesticides: i) crop production areas where highly toxic pesticides are intensively used; ii) crop areas where pesticides with high eco-toxicity levels are applied; iii) crop areas that apply substances that are the mostly used in Uruguay.

In PY1 (2nd semester) the demonstration network will be established. Activities include: i) consultation, planning and design; ii) field inputs and supplies purchase; iii) technical assistance module preparation; iv) design of field monitoring and data collection methods;

An operational manual, including roles, responsibilities and contributions, will be

agreed with participating institutions to guide field testing. MGAP will provide in-kind co-financing through technical and operational support to all activities related to the implementation and dissemination of field testing.

In PY2, the identified IPM options will be validated through a field-based process with selected rural producers. IPM options and the reduction of toxic pesticides will be tested in the six demonstration plots (network). Their economic, environmental, social and productive viability will be assessed. In PY3, the impacts of IPM will be monitored and compared with control areas, using the data collection method designed in PY1.

In PY1, PY2, and PY3, at least two field days will be organized in each demonstration unit.

Output 3.1.2 Two alternatives to toxic pesticides identified, evaluated, tested and demostrated, including IPM and ICM

In addition to the validation of IPM alternatives (output 3.1.1), in PY1 two alternatives to subtitute highly ecotoxic pesticides will be identified, assessed and validated by an specialized research institution. The most effective and sustainable substitutes are the plans of Integrated Pest Management (IPM) and Integrated Crop Management (ICM) which address pesticides (including herbicides). In PY2 field testing and demonstrations of those two substitutes, including IPM and ICM plans will be conducted. FAO will provide substantial technical backstopping to IPM activities. IPM approach does not only include the adequate agro-chemical management, but also the demonstration of culturally- and biologically-appropriate alternatives as part of the integrated pest management.

Output 3.1.3: Training in practices of IPM and application of alternatives to toxic pesticides delivered to agricultural workers, and farmers/producers

Supported by the network of demonstration units established as the main activity of Output 3.1.1, a comprehensive training program will be conducted in PY 2, 3 and 4 (1st semester). This activity will include 35 field days and 150 training events for stakeholders in different field areas. Training events will be co-sponsored by *Campo Limpio*, and will address crop rotations, improved crop husbandry, identification and assessment of pests, organic farming, biological control, etc.

Outcome 3.2: Increased awareness on effects of conventional pesticides and on available alternatives

Output 3.2.1 A communication strategy developed and implemented to raise awareness on the effects of pesticides on human health and the environment, and support dissemination of good practices

In PY1 the project's communication specialist will produce a specific Communication Strategy, including an Action Plan, tools and materials targeting different public groups and beneficiaries (rural schools, farmer organizations, local communities, broad public). The Strategy will address the effects of pesticides on human health and the environment, other aspects of pesticides management including empty containers, and the scale-up of IPM. It will be built in collaboration with CSOs working in rural areas, the

private sector, and relevant public agencies. The Strategy will be implemented in PY2 and PY3.

Component 4: Strengthening environmental monitoring and response to risks from hazardous pesticides

Component 4 aims at strengthening the institutions' and private sector's capacities to monitor contamination events caused by hazardous pesticides and other agro-chemicals in watersheds and environmental matrices.

In Uruguay, watershed committees have been established in strategic water catchments areas linked to major urban centers. There are specific programs to reduce the pollution levels in those watersheds. To date, these programs have focused on reducing nutrient accumulation without including specific actions on pesticides. GEF incremental financing will serve in Component 4 to support this objective, as detailed below. GEF incremental financing will serve in Component 4 to support this objective, as detailed below. Component 4 activities will be co-financed by OSE through the financing of water sampling and analysis, and the implementation of any mitigation measure required.

The work plan of Component 4 is fully detailed in Appendix 2 of this Project Document.

Outcome 4.1: Enhanced capacity for monitoring and timely response to pesticide risks to human health and the environment.

Output 4.1.1: A coordination mechanism for environmental monitoring and response to pesticide risks established

The main barrier to an effective surveillance is the lack of coordination between the involved institutions in Uruguay. The project will support the establishment of a formal coordination mechanism between MGAP, DINAMA, UdelaR, relevant local and private stakeholders, and watershed committees in PY1. Under this mechanism, in the second half of PY1, three Watershed Monitoring Plan(s) will be prepared for priority basins[17] (*Santa Lucia, San Salvador and Laguna del Sauce*). The Plans will be implemented in PY2, and monitored and evaluated in PY3 and PY4.

As described in outcome 3.1, the project will promote a qualitative change in crop production and pesticide management practices. Thus, pesticides residues are expected to decrease in environmental matrices of targeted watersheds. In Component 4, the expected decrease in pesticide runoff reaching watercourses will be assessed and monitored.

Output 4.1.2: Harmonized technical and analytical requirements for monitoring pesticide contaminants in relevant environmental matrices (soil, water, sediments and biota) defined

A specialized institution will be contracted in PY1 to develop harmonized protocols. Complementary equipment and supplies for both collection and process of soil and water samples will be subsequently purchased. Both protocols and equipment will help enhance the analytical capacities of the existing laboratories of DINAMA and DGSA. The

[17] These watersheds have been declared as priority by DINAMA.

harmonized technical requirements will be included in the Watershed Monitoring Plans mentioned in output 4.1.1.

Output 4.1.3. Detailed action protocol for responding to contamination risks and events, developed

In PY2, the current protocol applied by DINAMA in response to contamination events will be reviewed and improved, and subsequently disseminated to relevant agencies at the central, regional and local levels.

Output 4.1.4: Strengthened institutional capacity for environmental monitoring of pesticides

Starting in PY2, training in environmental monitoring of pesticides under an inter-institutional framework will be delivered to DGSA and DINAMA laboratory managers and technicians, as well as to all relevant institutions involved in environmental monitoring functions within the selected watersheds. These training events will be tailor-made to the specific institutional functions and responsibilities, in order to cover all key aspects of environmental monitoring, including laboratory procedures and field sampling, observations and measurements.

Output 4.1.5: Sites in at least 3 watersheds selected for monitoring and analysis of pesticide contamination.

This output is complementary to the activities to be implemented as part of outputs 3.1.1, and 4.1.1, as well as DINAMA's Santa Lucia River Basin Environmental Management Plan. Starting in PY2, targeted demonstration sites located in priority watersheds will be identified for detailed monitoring of pesticide contamination through soil and water sampling and analysis.

Output 4.1.6: Measures to minimize pesticide contamination in watersheds identified and implemented.

Based on the information generated through output 4.1.5, specific measures to reduce pesticide contamination in watersheds will be identified in PY2 and incorporated into the mandatory procedures to be followed by farmers as part of DINAMA's Watershed Environmental Management Plans.

2.4. GLOBAL ENVIRONMENTAL BENEFITS

The main global environmental benefit the project will deliver is the disposal of up to 160t of POPs (primarily Endosulfan) and other obsolete pesticides, through the development and implementation of a management plan, reducing the danger to human health and the existing risk of soil and water contamination.

Through the strengthening of national capacities for the sound management of pesticides throughout their lifecycle, and the development of a system of management and recycling of pesticide containers, the project will also contribute to the prevention of sources of pollution and the future accumulation of POPs, containers and obsolete pesticides and their packaging. By promoting and piloting IPM alternatives, and

implementing a complementary communication strategy, the project will support the reduction of private sector's reliance on highly hazardous pesticides.

2.5. COST EFFECTIVENESS

Cost effectiveness will be achieved through i) investing resources in activities and areas where there is a significant potential impact and high probability of sustainability and replication; and ii) supporting an integrated approach that includes all aspects of the pesticides management and their lifecycle.

Originally, the PIF included the disposal of 300 tons of obsolete pesticides as a possible outcome. However, during full project preparation baseline analyses determined that this value would be difficult to achieve because a significant proportion of obsolete pesticide stocks are highly fragmented in small quantities stored in private facilities (mainly local distributors, contractors and producers). At the same time, subsequent to the PIF preparation and approval, the environmental authority (DINAMA) began a process of transferring responsibilities to the private sector, specifically to CAMAGRO and the *Campo Limpio* program (an initiative developed by CropLife Latin America)[18]. In the framework of the Decree 152/013[19], *Campo Limpio* prepared a draft Management Plan for agro-chemical containers and obsolete stocks - based on the principles of mandatory recovery of containers and extended responsibility. The Management Plan involves the participation of private actors that manage agro-chemical containers. In September 2014, this Management Plan is in process of approval by DINAMA[20] and adoption by *Campo Limpio.*

The important progress made through the above initiatives was a key element for the review of the strategy and methodology of the project. As such, the revised design prioritizes the support to the implementation and operation of this new scheme of distribution of institutional responsibilities between the public and private sectors, as well as the consequent strengthening of training and dissemination instruments of improved knowledge and practices for all members of the lifecycle of pesticides, in particular the end users (agricultural producers and their organizations).

2.6. INNOVATIVENESS

The Project includes innovative approaches to the pesticides lifecycle management that could significantly reduce the negative impacts associated with the use of pesticides, and in addition could become good practice models for other countries in the region and international agencies that promote sustainable rural development. FAO has a long history of tactics to improve pest management practices and improve pesticides lifecycle. Innovative approaches include: 1. the use of bio-beds, 2. promote the use of resistant varieties, 3. promote the use of integrated pest and crop management practices, 4. the adoption of cultural pest control and natural enemies, 5. crop rotation schemes.

[18] For a full description of this process, please refer to Section 1 of this Project Document.
[19] Approved in May 2013. See a full description in Section 1.
[20] As detailed in Section 1, DINAMA has the mandate of approving the management plans submitted by the private sector for soundly managing agro-chemicals, stocks, and obsoletes.

The Project innovative approaches will include: (i) support to a public-private partnership (ii) active participation of the commercial sector in addressing obsolete elimination and container recycling (iii) on-the-ground cooperation between environmental and productive agencies; (iv) promotion of improved technologies at the producer level through an integrated approach of field demonstrations and technical assistance; and (v) inclusion of pesticides in watershed management initiatives. The shared management and coordination among regulatory and enforcement institutions and the private sector, represents an innovative approach of shared responsibility, capacity development, and promotion of good practices for rational management between users. The mandatory nature of the treatment, recovery and recycling of empty containers requires considerable investments and a major logistical and technological change to be addressed with the application of innovative instruments. The Project aims to address this.

The Project will support the establishment of a network of demonstration farms or plots located in priority watersheds and near the project supported container collection centers. As part of this network, innovative instruments for real-time remote monitoring of spraying equipment and environmental risk assessment methodologies will be tested, validated and disseminated.

3. FEASIBILITY

3.1. ENVIRONMENTAL IMPACT ASSESSMENT

The project is designed to generate positive benefits for the environment through the elimination of obsolete pesticides, reducing the risk of eventual contaminated sites, the reduction in the use of dangerous pesticides and the systematic and environmentally sound handling of empty pesticide containers.

However, in achieving these objectives, there are unexpected potentially negative impacts on the environment that may occur especially in case of accidents in the process of transportation and destruction of obsolete pesticides and the treatment of empty containers prior to recycling. To mitigate these risks, the project will follow the guidelines of the FAO's Environmental Management Toolkits (EMTK) of FAO for the evaluation, protection, transportation, and disposal of obsolete pesticides and empty containers. Environmental Management Plans (EMP) will also be developed for environmental safeguard activities which will take into consideration all potential risks and identify the corresponding mitigation measures. The EMP will cover:

- repackaging of obsolete pesticides;
- appropriate temporary storage of obsolete stockpiles and empty containers;
- collection, transport and storage and handling empty containers;
- secure transport and intermediate storage of stocks of obsolete pesticides;
- eventual decontamination of sites contaminated with pesticides.

Due to the application of the methodologies established in the EMTK, no adverse environmental impacts have been recorded in similar FAO projects since 2003. Therefore, consistent with the guidelines contained in the "Environmental Impact Assessment - Guidelines for FAO Field Projects", the project has been classified as environmental category B.

3.2. RISK MANAGEMENT

No significant risks are foreseen, given the full project integration with Uruguay's policies and environmental priorities. However, the achievement of the project's objectives may experience some delays as a result of the strong role of the private sector in the pesticide management process, the need to generate adequate public-private coordination mechanisms, the limited knowledge of sound pesticide use and management approaches in the private sector. Risks have been assessed during full project preparation. Mitigation measures are proposed in Table 4, and where appropriate, will be further elaborated in the EMP.

Table 4: Project Risks and Mitigation Measures

RISK	OCCURRENCE / PROBABILITY	MITIGATION MEASURES
Delays in the adoption of updated norms and procedures, and lack of inter-institutional coordination.	Medium	Campaigns of promotion and awareness raising for Government representatives and staff, the commercial sector and end users. The project will support the operation of the inter-ministerial working group created by MGAP to coordinate actions and assess the current legal framework for the management of pesticides.
Limited collaboration of the private sector and the producers to support the project, in particular shipping containers to collection centers, and identification of stocks of obsolete pesticides and any eventual contaminated sites.	Low	Complementing the activities carried out during the preparation of the project, significant efforts will be devoted during implementation to raising awareness on the effects of obsolete pesticides and the importance of participation of agricultural producers in the project. The commercial sector has already formalized its support to the new regulations for the management of pesticides and expressed its support to the objectives and activities of this project.
The budget available is not sufficient for the environmentally sound disposal of identified stockpiles of obsolete pesticides.	Low	According to current regulations, importers and formulators of pesticides will be responsible for the disposal of obsolete stocks. Should the available budget be insufficient, the private sector will be responsible for the proper storage of pesticides and covering the financial gap.

4. IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS

4.1. INSTITUTIONAL ARRANGEMENTS

The implementation and institutional framework of the project is based on the mandates and experience of leading institutions related to the management of pesticides in Uruguay. The Ministry of Housing, Territorial Planning and Environment (MVOTMA) will be the lead project executing partner, through the National Directorate of Environment (DINAMA), responsible for the coordination and execution of the project activities. Within DINAMA, this task shall be under the responsibility of the Department of Waste and Substances (DRS) of the Division of Environmental Planning (DPA). DRS will be supported by a small Project Coordination Unit (UCP). For the implementation of the various activities of the project, DRS will work closely with a set of public and private institutions, including other divisions and departments of the DINAMA, the General Directorate of Agricultural Services (DGSA) and other units of MGAP, the Civil Association *Campo Limpio,* the Water and Sanitation Company (OSE), farmer organizations and the private sector. In addition, as described in Section 1.1, the institutional framework of the project will include other institutions, which will participate as beneficiaries of capacity building and training activities.

In order to ensure proper coordination, integration, and participation of the institutions participating in decision-making related to the implementation of the project, an Inter-institutional Coordination Committee (CCI) and a Technical Monitoring Committee (CTS) will be created. The CCI will serve as Project Steering Committee (PSC). The roles and responsibilities of the CCI/PSC and CTS are described in Section 4.2.

4.2. IMPLEMENTATION ARRANGEMENTS

FAO's role

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

FAO will report on project progress to the GEF Secretariat; financial reporting will be to the GEF Trustee. FAO will closely monitor the project and provide technical support and carry out supervision missions.

As the GEF agency for the project, FAO will:

- Administrate, manage and disburse funds from GEF in accordance with FAO rules and procedures, and in close consultation with the national project executing partner (DINAMA);
- Oversee project implementation in accordance with the project document, approved annual work plan and budget(s) (AWP/B), agreements with co-financiers, and the rules and procedures of FAO;

- Provide technical guidance to ensure that appropriate technical quality is applied to all activities;
- Carry out at least one supervision mission per year;
- Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review (PIR), on project progress and provide financial reports to the GEF Trustee.

The **FAO Representative in Uruguay** will be the Budget Holder (BH) responsible for the timely operational, administrative and financial management of the project. He/she, working closely with the UCP, the national project executing partner (DINAMA), the FAO Lead Technical Officer and Lead Technical Unit, will be responsible for:

- Management of GEF resources in accordance with the Project Document, and approved Annual Work Plans and Budgets;
- Procurement of goods and contracting of services for the project and financial reporting in accordance with FAO rules and procedures;
- Preparation of annual/six-monthly budget revisions, as required, for submission to the LTO/LTU and the GEF Coordination Unit;
- Preparation of six-monthly financial reports to be submitted to the FAO GEF Coordination Unit and shared with the executing partners and the PSC;
- The BH will also be responsible for reviewing and giving no-objection to Annual Work Plans and Budgets (AWP/B), Project Progress Reports (PPRs) and co-financing reports submitted by the Project Coordination Unit (UCP), in consultation with the FAO Lead Technical Officer (LTO), Lead Technical Unit (LTU) and the FAO GEF Coordination Unit.

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

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

- Review and provide clearance to Terms of Reference (TORs) for consultancies, Letter(s) of Agreement (LOAs) and contracts, in consultation with the LTU and relevant technical officers in FAO;
- Participate in the selection of consultants and research centres to be hired with GEF funding;
- 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;
- Review and approve project progress reports (PPRs) submitted by the Project Coordination Unit to the BH;

- Support the BH in reviewing, revising and giving no-objection to AWP/B to be approved by the Project Steering Committee;
- Prepare the annual Project Implementation Review (PIR) report, with inputs from the Project Coordinator, to be submitted to the LTU and the FAO GEF Coordination Unit 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;
- Field annual (or as needed) technical support and backstopping missions;
- With the LTU, review and clear TORs for the mid-term review, participate in the mid-term workshop with all key project stakeholders;
- With the LTU, review and clear TORs for the final evaluation, participate in the final project closure workshop with all key project stakeholders and the development of and follow up on recommendations on how to insure sustainability of project outputs and results after the end of the project.

The **FAO GEF Coordination Unit** in the Investment Centre Division (TCI) will review and approve project progress reports, annual project implementation reviews (PIRs) and financial reports and budget revisions. The Unit will undertake supervision missions if considered necessary. The FAO GEF Coordination Unit will, in collaboration with the FAO Finance Division, request transfer of project funds from the GEF Trustee based on six-monthly projections.

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

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

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

The **National Director of DINAMA** will chair the PSC/CCI, which will be comprised by the FAO Representative in Uruguay, the authorities of MGAP, MSP, the Ministry of

Transport and Public Works (MTOP) or their delegates, *Campo Limpio*, and representatives of civil society and producer organizations. PSC/CCI meetings will normally be held annually, but the Chairperson will have the discretion to call additional meetings if necessary. Meetings of the PSC will not necessarily require physical presence and could be undertaken electronically. The UCP will act as Secretariat to the PSC and be responsible for providing PSC members with all required documents in advance of PSC meetings, including the draft AWP/B and any significant technical proposals or analyses. The UCP will prepare written report of all PSC meetings and be responsible for logistical arrangements related to the holding of such meetings, supported by FAOR Uruguay as the Budget Holder.

MVOTMA/DINAMA will be the lead project executing partner, and will host the **Project Coordination Unit (UCP).** The UCP will be headed by a full-time Project Coordinator who will exercise its functions supported by the Technical Monitoring Committee (CTS) and FAO. The Project Coordinator will be supported by skilled technical and administrative staff that will be partially covered by co-financing. In close consultation with the PSC/CCI, FAO and other partners involved in the execution of project components, the UCP will:

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

Other executing partners

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

MGAP will be the primary implementation partner through the participation of several MGAP agencies and/or units in the implementation of specific project activities. DGSA will be directly involved in all technical and institutional aspects of pesticide regulation and registration (including ERA adoption), as well as providing inputs to the design and implementation of demonstration units, watershed management plans, and communication/dissemination instruments. DIGEGRA, INAVI and INALE will support the promotion of improved technologies among their specific productive subsectors (horticulture, viticulture and dairy). INIA will provide assistance to adaptive research activities and development of technological alternatives, will DGDR and RENARE will be key partners for the incorporation of pesticides into soil and water Management Plans

and the SNIA, as well as providing substantial field support to the implementation of the network of demonstration units

MSP will collaborate with DINAMA in providing inputs and expertise on occupational health aspects, particularly with regards to the preparation of training and communications materials.

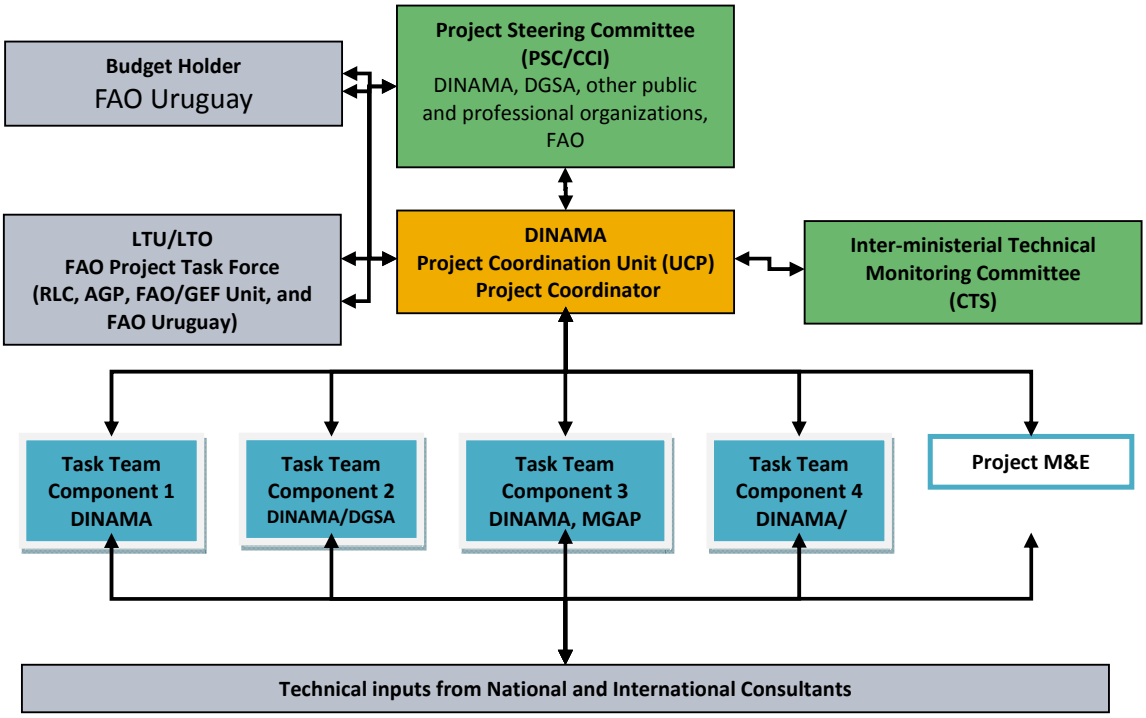
Campo Limpio will participate in project implementation through the direct support to activities related to the management of empty pesticide containers and the elimination of obsolete pesticides stocks. This will include the establishment and operation of the network of Container Collection Centers, the execution of the obsolete disposal program, and the joint implementation of training and dissemination efforts with the field demonstration units

OSE will support the implementation of project activities related to the prevention and treatment of pesticide contamination in drinking water, particularly in strategic watersheds. This will include an active role in the development of activities related to water pollution monitoring and control.

RAPAL, as an active CSO involved in creating awareness on the risks of pesticides will support project efforts by promoting the participation of the population in awareness campaigns, as well as coordinating initiatives to develop "citizen monitoring" of the lifecycle of pesticides

The institutional arrangements of the components and project management mechanisms are schematized in the Figure 1 below:

Figure 1: Project Implementation Arrangements



4.3. FINANCIAL PLANNING

The financial plan is illustrated in Table 5 below.

Table 5: Financial plan (by component, outputs and co-financier)

Component/output	MVOTMA	MGAP	OSE	CAMPO LIMPIO	FAO	Subtotal co-financing	% co-financing	GEF	% GEF	Total
Component 1: Reduction of stocks and elimination of obsolete pesticides and containers						3,556,000	91	**348,923**	9%	**3,904,921**
Output 1.1.1 MGAP and DINAMA trainers trained in inventory planning, safeguarding and safe storage of hazardous waste, and environmental assessment of contaminated sites	53,600	140,000		524,000	35,000					
Output 1.1.2 Staff of DINAMA, MGAP, FAGRO and local governments trained in obsolete pesticides and contaminated sites	53,600	160,000		524,000	35,000					
Output 1.1.3 Completed inventory of obsolete pesticides stocks, including POPs	53,600			524,000						
Output 1.1.4 Strengthened capacity of the private sector for the elimination of obsolete pesticides, including POPs, and empty containers	53,600			524,000						
Output 1.1.5 Empty container management strengthened extending the network of collection centers and recycling facilities	53,600			524,000						
Output 1.2.1 Guidelines for private sector, including specific site remediation proposals	268,000				30,000					
Component 2: Strengthening the legal framework and institutional capacity for the rational and						597,000	71%	**243,013**	**29%**	**840,013**

integral management of pesticides throughout their lifecycle										
Output 2.1.1 Pesticides regulations reviewed and updated	67,000	40,000								
Output 2.1.2 Current pesticides registration and authorization system assessed, gaps and capacity building needs identified and measures to address these implemented	67,000	60,000								
Output 2.1.3 ERA models included in the training of institutions	67,000				35,000					
Output 2.1.4 Adoption of ERA tools to support pesticides registration	67,000	60,000								
Output 2.1.5 ERA performed to assess at least 3 highly used active ingredients	67,000									
Output 2.1.6 Improved Pesticide Information System	67,000									
Component 3: Promoting Integrated Pest Management, pesticide sound use and management, and other alternatives to hazardous pesticides, through demonstration units						**1,172,000**	**61**	**755,613**	**39%**	**1,927,613**
Output 3.1.1 IPM strategies and other alternatives for priority crops, developed and field tested.	131,333	150,000								
Output 3.1.2 Two alternatives to toxic pesticides identified, evaluated, tested and demonstrated, including IPM and ICM	131,333	150,000								
Output 3.1.3 Training in practices of IPM and application of activities to toxic pesticides delivered to agricultural workers, and farmers/producers	131,333	210,000								
Output 3.2.1 A communication strategy	268,000									

developed and implemented to raise awareness on the effects of pesticides on human health and the environment and support dissemination of good practices										
Component 4: Strengthening environmental monitoring and response to risks from hazardous pesticides						1,833,000	84%	**356,113**	**16%**	**2,189,113**
Output 4.1.1 A coordination mechanism for environmental monitoring and response to pesticides risks, established	68,000	20,000	208,333							
Output 4.1.2 Harmonized technical and analytical requirements for monitoring pesticide contaminants in environmental matrices (soil, water, sediments and biota) defined	68,000	30,000	208,333							
Output 4.1.3 Detailed action protocol for responding to contamination risks and events developed	68,000		208,333		30,000					
Output 4.1.4 Strengthened institutional capacity for environmental monitoring of pesticides	68,000	20,000	208,333		35,000					
Output 4.1.5 Sites in at least 3 watersheds selected for monitoring and analysis of pesticide contamination	68,000		208,333							
Output 4.1.6 Measures to minimize pesticide contamination in watersheds identified and implemented	68,000	40,000	208,333							
Project Management Cost	0	0		0	100,000	100,000		170,366		
TOTAL	**2,008,000**	**1,080,000**	**1,250,000**	**2,620,000**	**300,000**	**7,258,000**	**79%**	**1,874,028**	21%	**9,132,028**

4.3.1. GEF inputs

The financial resources to be provided by GEF will be allocated mainly to support incremental activities for strengthening of knowledge and capacities, including generation, validation, and dissemination of information; the training of the public and private sector in critical aspects of the life cycle of pesticides; the development of methodologies for the determination and assessment of environmental risks caused by pesticides (including interventions with territorial approach at the level of river basins); and the reduction of the vulnerability of communities and rural families through the promotion of good practices in the use and handling of pesticides.

4.3.2. Government inputs

The Government of Uruguay will provide financial resources for project implementation as follows: MGAP (U$S 1,080,000), MVTOMA (US$ 2,008,000), and OSE (U$S 1,250,000). The main activities to be contributed through co-financing will include the structures for temporary storage of obsolete pesticides prior to shipment; the formalities to comply with the provisions of the Basel Convention on the transboundary movement of hazardous substances; the technical staff required to receive and provide training and technical assistance to farmers and to develop assessments and environmental management plans related to obsolete pesticides and any contaminated sites (EA and EMP); and investments in the centres for the collection and treatment of containers. The GoU, mainly through in-kind commitments by DGSA and OSE, will also contribute the dedication of technical and administrative personnel in laboratories and the operating costs for the UCP (office space, administrative and IT support, communications, supplies, etc.). Specifically, OSE's contribution of US$ 1.25 million will finance the participation of laboratories and technicians to support environmental monitoring requirements and the response to pesticide contamination events in strategic watersheds (Component 4)

4.3.3. FAO inputs

FAO provide grant co-financing by US$ 300,000 through the TCP project "Strengthening national capacities in biosafety of GM crops for sustainable agricultural production" (TCP/URU/3403, 13/VII/URU/2149), Uruguay. This TCP project will contribute to the development of regulations; institutionalize capacities for laboratory analysis, experimental analysis and development of risk assessment protocols. In addition, FAO will provide in-kind co-financing by contributing to the quality control of current stocks of pesticides. These capacity building activities will ensure that chemical stocks are adequately managed through the Pesticide Stock Management System. FAO will also provide in-kind co-financing through staff time not covered by the fee, in order to support capacity building/training activities under each of the four technical components.

4.3.4. Other co-financiers inputs

The private sector will be a strategic partner of the project, making significant contributions to co-finance its implementation, mainly through Campo Limpio, commercial and family farmers and their organizations, and civil society. Campo Limpio will provide US$ 2,620,000 for the collection and management of containers and

obsolete pesticides (Component 1), while the producers, their organizations, and farmers and their organizations, will actively participate in training and awareness activities and will contribute the necessary facilities and inputs (land, seeds, fertilizers, machinery, crop management and yield records, labor, access to plots, etc.) for the establishment and operation of the demonstration plots to be implemented as part of Component 3.

4.4. FINANCIAL MANAGEMENT OF AND REPORTING ON GEF RESOURCES

Financial management and reporting in relation to the GEF resources will be carried out in accordance with FAO's rules and procedures, and in accordance with the agreement between FAO and the GEF Trustee. On the basis of the activities foreseen in the budget and the project, FAO will undertake all operations for disbursements, procurement and contracting for the total amount of GEF resources, as request by the UCP.

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

Financial Reports. The Budget Holder (BH) shall prepare six-monthly project expenditure accounts and final accounts for the project, showing amount budgeted for the year, amount expended since the beginning of the year, and separately, the un-liquidated obligations as follows:

1. Details of project expenditures on a component-by-component and 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.
2. Final accounts on completion of the Project on a component-by-component and output-by-output basis, reported in line with project budget codes as set out in the Project document.
3. A final statement of account in line with FAO Oracle Project budget codes, reflecting actual final expenditures under the Project, when all obligations have been liquidated.

Financial Statements. Within 30 working days of the end of each semester, i.e. on or before 31 July and 31 January, the FAO Representation in Uruguay shall submit semiannual statements of expenditure of GEF resources to the PSC/CCI and the CTS, which will be included in the PPRs. The purpose of the financial statement is to list the expenditures incurred on the project on a six monthly basis compared to the budget, so as to monitor project progress and to reconcile outstanding advances during the six-month period. The financial statement shall contain information that will serve as the basis for periodic budget revisions.

The BH will submit the above financial reports for review and monitoring by the LTO and the FAO GEF Coordination Unit. Financial reports for submission to 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 shall utilize the GEF project funds in strict compliance with the Project Document. The BH shall be authorized to make variations not exceeding 20 per cent on any total output budget line or any cost category line of the project budget provided that the total allocated for the specific budgeted project component is not exceeded and the reallocation of funds does not impact the achievement of any project output as per the project Results Framework (Appendix 1). Any variations exceeding 20 per cent on any total output budget line or any cost category line, which may be necessary for the proper and successful implementation of the project, shall be subject to prior consultations with the LTO and the FAO-GEF Coordination Unit. In such a case, a revision to the FAO-GEF budget in FPMIS should be prepared by the BH and approved by the LTO and the FAO-GEF Coordination Unit. Cost overruns shall be the sole responsibility of the BH.

Audit. The Project shall 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 FAO 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 terms of reference of each. Internal audits of accounts, accounting records, bank reconciliation and asset verification take place at FAO field and liaison offices on a cyclical basis.

4.4.1. Procurement

As per the request of GoU, FAO will carry out the administrative and financial execution of GEF resources. The FAO Representation in Uruguay will procure the equipment and services foreseen in the budget (Appendix 3) and the AWP/B, in accordance with FAO rules and procedures.

Careful procurement planning is necessary for securing goods, services and works in a timely manner, on a "Best Value for Money" basis, and in accordance with the Rules and Regulations of FAO. It requires analysis of needs and constraints, including forecast of the reasonable timeframe required to execute the procurement process. Procurement and delivery of inputs in technical cooperation projects follow FAO's rules and regulations for the procurement of supplies, equipment and services (i.e. Manual Sections 502 and 507). *Manual Section 502*: "Procurement of Goods, Works and Services" establishes the principles and procedures that apply to procurement of all goods, works and services on behalf of the Organization, in all offices and in all locations, with the exception of the procurement actions described in Appendix A – Procurement Not Governed by Manual Section 502. *Manual Section 507* establishes the principles and rules that govern the use of Letters of Agreement (LoA) by FAO for the timely acquisition of services from eligible entities in a transparent and impartial manner, taking into consideration economy and efficiency to achieve an optimum combination of expected whole life costs and benefits ("Best Value for Money").

As per the guidance in FAO's Project Cycle Guide, the BH will prepare an annual procurement plan for major items which will be the basis of requests for procurement actions during implementation. The plan will include a description of the goods, works, or services to be procured, estimated budget and source of funding, schedule of procurement activities and proposed method of procurement. In situations where exact information is not yet available, the procurement plan should at least contain reasonable projections that will be corrected as information becomes available.

A procurement plan shall be prepared following the approval of the project (inception phase). Before commencing procurement, the UCP will prepare the project´s Procurement Plan for approval by the PCS/CCI. This plan will be reviewed during the inception workshop and will be approved by the FAO Representative in Uruguay. The UCP Coordinator will update the Plan every six months, and request the approval of PSC/CCI and submit the plan to the FAO Representative in Uruguay for approval.

4.5. MONITORING, EVALUATION AND REPORTING

Monitoring and evaluation (M&E) of project progress in achieving its objectives and results will be carried out on the basis of the objectives, indicators and targets of outcomes set out in the Project Results Framework and the AWP/B(s).

The M&E system will follow the guidelines and policies of GEF and FAO, including the GEF POPs Tracking Tool. The M&E system (budgeted at US$ 82,000) will be revised and updated during the initial phase of the project. This will include: (i) review of the results of the project framework; (ii) adjustment and update of outcome indicators; (iii) identification of missing information and measures to be taken to obtain such information; and (iv) definition of roles and responsibilities of the institutions participating in project monitoring. The M&E system is scheduled to be fully operational within 6 months of project inception.

The operation of the project's M&E, as well as the consolidation and data processing system will be the responsibility of the UCP headed by the Project Coordinator. This ongoing work will be closely linked to the process of preparation and execution of annual work plans, budgets and bi-annual project progress reports. The preparation of the AWP/B and the semi-annual reports will represent the result of a unified planning process involving the main participants of the project. As a tool to adopt a results-based management, the AWP/B will identify the actions proposed for the following year and will provide the necessary data on the goals to be achieved, while the semi-annual reports will present the results of the monitoring of the implementation of actions and the progress made with regard to the goals. Annually, the UCP will organize a review and planning workshop with representatives of all participating institutions. This workshop will be scheduled as an activity prior to the annual meeting of the PSC/CCI. The AWP/B will be prepared in a manner consistent with the project results framework to ensure proper compliance and monitoring of project outcomes and outputs.

4.5.1. Oversight and monitoring responsibilities

Project monitoring will be carried out by UCP/DINAMA and FAO. This monitoring will be based on: (i) documenting all transactions and results of the project through a detailed physical monitoring system; (ii) ensure that the project is implemented in accordance with the planned activities and applying pre-established norms and guidelines; (iii) systematically identify and monitor risks and mitigation strategies; and (iv) ensure that the outputs of the project are generated based on the results matrix and duly reported by the responsible institutions. In addition, specific evaluations of those components and activities that show delays or implementation difficulties will be carried out, with the purpose of identifying possible measures to resolve the identified difficulties.

4.5.2. Indicators and sources of information

In order to follow up on project products and results, including contributions to comply with global environmental benefits, a set of indicators have been developed that are listed in the Results Framework (Annex 1). The indicators and means of verification will be applied to monitor the performance and impact of the project. Following FAO's procedures of monitoring and progress, the data collected report formats will have a level of detail sufficient to be able to track results and specific products and to anticipate possible project risks. Product indicators will be monitored semi-annually while result indicators will be measured annually to the extent possible, or at least as part of the intermediate and final evaluations.

The network of producers associated with the demonstration farms to be established as part of Component 3 will also be an important source of information for the M&E system. The data collected from the network will serve as a complement to the information generated on the participation of producers in the removal of obsolete pesticides, containers management systems and advances in knowledge, attitudes and practices related to the use and rational management of pesticides.

The indicators for products and results of the project are designed to monitor biophysical and socio-economic impacts, and effective progress in the development and consolidation of capacities of institutions, private sector and rural producers to dispose safely of obsolete pesticides, including POPs and to strengthen the capacity for the integrated management of pesticides in Uruguay.

The indicators may be improved or adjusted, as needed, in consultation with project stakeholders during the initial phase of the project. This process of refinement of indicators of the project facilitate a greater involvement of the participants in the project and a broader support for the monitoring and reporting of achievements and difficulties experienced by the project.

The main sources of information to support the M&E plan include: i) monitoring systems of DINAMA and DGSA ii) participatory workshops for review of progress with institutions and beneficiaries; III) in-situ monitoring of the implementation of good practices; (iv) six-monthly project progress reports (PPRs) prepared by the Project Coordinator with inputs from DINAMA, DGSA, MSP, project specialists and other stakeholders; (v) consultant reports; vi) training reports; (vii) mid-term review and final evaluations; (viii) financial reports and budget reviews; IX) annual project

implementation reviews (PIRs) prepared by the LTO in FAO with the support of the FAO representation in Uruguay, based on inputs from the Project Coordinator; and (x) reports of supervision missions conducted by FAO.

4.5.3. Reporting schedule

The specific reports to be prepared as part of the project's M&E include: (i) the Project Inception Report, (ii) the AWP/B, (iii) PPRs, (iv) PIRs, (v) technical reports, (vi) Co-financing Report, and (vii) Final report.

In addition, during the mid-term review and final evaluation of the project, it will be necessary to evaluate progress compared to the baseline, in accordance with the monitoring and evaluation tools used by GEF (completed during project preparation).

Project Inception Report: Following the approval of the project by FAO and the subsequent signing of the Government Cooperation Agreement (GCP) between FAO and the Government of Uruguay, an inception workshop will be carried out. Immediately after the workshop, the UCP and DINAMA, with the support of the Project Coordinator, will prepare a report in consultation with the FAO representation in Uruguay and other project partners. The report shall include a description of the roles and institutional responsibilities and actions for the coordination among project partners, the progress to date on the establishment of the project and the start-up, and an update of the changes in external conditions that may affect the implementation of the project. The report will also include a first AWP/B and a M&E summary plan. The draft initial report will be distributed to FAO and the PSC/CCI for review and comments before its finalization, no later than three months after the project inception. The report must be approved by the FAO BH, the LTU and the FAO-GEF Coordination Unit, and subsequently loaded into the FPMIS by the BH.

Annual Work Plan and Budget (AWP/B): The Project Coordinator, in consultation with DINAMA, will submit to the FAO LTO an AWP/B. 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/CCI for approval and to FAO BH for final no-objection and upload in FPMIS.

Project Progress Reports: One month before the mid-point of each project year, the Project Coordinator, under the supervision of DINAMA, 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; (iv) lessons learned; and (v) 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 FAO GEF Coordination Unit for final clearance. The final PPR will be circulated by the BH to the PSC/CCI.

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 FAO 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 Uruguay 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 PSC/CCI and other project partners as appropriate. These will be posted on the FAO FPMIS by the representation of FAO in Uruguay.

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

Terminal Report: Within two months before the project completion date, the Project Coordinator will submit a draft Terminal Report to the PSC/CCI and the representation of FAO in Uruguay, 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. The main purpose of the Final report is to provide guidance at the political level (Minister/or high official) about the necessary political decisions for the continuation of the project, and present information on the use of the funds to the donor. The Final report will consist of a brief summary of the main products and results achieved conclusions and recommendations of the project, without adding background, descriptions or technical details. The report will be aimed at people who are not

necessarily technical specialists and who should understand the political implications of the conclusions and technical needs to ensure the sustainability of the results of the project. The Final report will assess the activities, summarize the lessons learned and provide recommendations regarding the integrated and sound management of pesticides, including POPs in the context of local and national development priorities, as well as in terms of practical applications. This report shall contain the findings of the final evaluation. A project evaluation meeting will be organized to discuss the draft Final report with the PSC/CCI and CTS prior to completion by the Project Coordinator and approval by the BH, LTO and the FAO-GEF Coordination Unit.

4.5.4. Monitoring and evaluation plan summary

Monitoring of project progress will be against indicators identified in the project logical framework. These indicators will be further refined, as necessary, in consultation with project stakeholders during the project inception phase. This process of further collaborative refinement of project indicators will facilitate greater stakeholder engagement with the project and support broader monitoring and reporting of project achievements and failures.
The monitoring and evaluation plan is summarized in Table 6 below.

Table 6: Summary of the main M&E activities

Monitoring and evaluation activity	Responsible parties	Time frame	Budget
Inception Workshop	Project Coordinator, PSC/CCI, CST, FAO (FAO Uruguay as Budget Holder - BH, FAO Lead Technical Officer and Technical Unit - LTO and LTU, FAO GEF Coordination Unit)	Within first six months of project inception	US$ 10,000
Inception report	Project Coordinator (PC) with inputs from CST and project partners. Cleared by FAO LTO, LTU, BH and the FAO GEF Coordination Unit, and the PSC/CCI.	Immediately after the project inception workshop	US$ 1,500
Design and implementation of the M&E system, including staff training	PC with support from FAO LTO and LTU.	Within the first six months after project inception	US$ 1,500
Field-based impact monitoring	PC with support from other project partners - local NGOs, farmers/producers associations.	Permanent	US$ 3,000
Monitoring missions	FAO LTO/LTU	Annual or as required.	Paid by GEF Agency fee
Project progress	Project Coordinator.	Semi-annually	US$ 3,000

Monitoring and evaluation activity	Responsible parties	Time frame	Budget
reports (PPRs)	Submitted to the BH and LTU for clearance. Finalized reports submitted to the FAO GEF Unit by the LTO, and to the PSC/CCI by the PC.		
Project Implementation Review (PIR)	FAO LTO with inputs from the PC, BH and LTU. Submitted by the FAO GEF Coordination Unit to the GEF Secretariat. Final report also submitted to the PSC/CCI and the GEF Operational Focal Point.	Annually	Paid by GEF Agency fee
Co-financing Reports	PC with information from all co-financing partners.	Six monthly and annually as part of PPR and PIR.	US$ 1,500
PSC meetings	Project Coordinator, PSC Chair, FAO BH	At least once a year	US$ 5,000
Technical reports	PC, Consultants, FAO LTO/LTU	As appropriate	From component budgets and fee
Mid -term review	UCP, FAO LTO, LTU in consultation with the project team and other partners	At mid-point of project implementation	US$ 15,000
Final evaluation	External Consultant, FAO independent Evaluation Office (OED) in consultation with the project team and other partners	At the end of project implementation	US$ 40,000
Final report	UCP, FAO LTO	At least one month before end of project	US$ 1,500
		TOTAL M&E Budget	US$ 82,000

4.6. PROVISION FOR EVALUATIONS

At the end of the 21st month of project implementation, a mid-term review will be carried out to review the progress and effectiveness of in terms of achievement of project objectives, outcomes and outputs. Findings and recommendations of this review will be instrumental for bringing improvement in the overall project design and execution strategy for the remaining period of the project's term.

An independent Final Evaluation (FE) will be carried out three months prior to the terminal review meeting of the PSC/CCI. 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 neighboring countries. In this line, the FE will identify future actions to expand the project's impact in successive phases, integrate and expand outputs and best practices, disseminate information among authorities and institutions with competence in

pesticides management and integrated pest management, to ensure the continuity of the process initiated by this project. The FE should also pay particular attention to assess the achievement of project outcome indicators.

4.7. COMMUNICATION AND VISIBILITY

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

The project communication strategy will also support the UCP to ensure two-way exchanges with stakeholders in order to improve project implementation and ensure buy-in, particularly by the private sector in relation to the long term sustainability of the container management scheme, and by decision makers and enforcement structures in relation to sound pesticide life cycle management in Uruguay.

The project design is focused on the execution of demonstration activities that enable the identification of alternatives to chemical pesticides, improve the management of packaging, and promote the adoption of good practices in pesticides use and handling. The communication strategy will also define mechanisms for disseminating experiences from demonstration plots and collection/recycling centers, both in project areas and other regions. The communication plan will target rural producers and their organizations (including watershed committees), distributors, and service providers (contractors, extension officers and technical advisors). Educational entities such as rural schools, agricultural schools and educational institutes, will also be addressed by including specific activities. The communication plan will seek to generate synergies and complementarity with initiatives being implemented by all the participating institutions, in particular MGAP and MSP.

Considering that similar initiatives for sound pesticides management are present in neighboring countries, the communication plan may include regional events for disseminating project results and experience-sharing.

5. SUSTAINABILITY OF RESULTS

5.1. SOCIAL SUSTAINABILITY

The project will generate important social benefits through the reduction of direct exposure of the population to toxic chemicals and associated contaminated environments, by: a) identifying and eliminating obsolete pesticides; b) strengthening the program of recycling of empty pesticide containers; and c) implementing actions to improve the life cycle pesticides management.

The promotion and adoption of improved pest management practices will contribute to the reduction of crop losses by weeds, insects and other pathogens, helping reduce the dependence on chemical pesticides, including POPs. This will contribute to the prevention of future accumulation of obsolete pesticides and will support the achievement of global environmental benefits and sustainability.

The project will generate community's health benefits by: a) eliminating pesticides stockpiles that are stored in containers at public or private facilities; b) removing contaminated containers from rural households/production units; c) generating and promoting the adoption of alternative pesticides use and management, and d) improving the quality of marketed products, regulated through the registration and control system throughout the pesticides life cycle.

Due to their roles and traditional responsibilities in rural areas, women are particularly vulnerable to the adverse effects of pesticides, since they constitute the bulk of the workforce in pre- and post-harvest activities horticultural products, whether for marketing or for domestic consumption. As well, teachers in rural areas are traditionally women. Rural schools are particular exposed to the agrochemical use and fumigation, and have a key role in raising awareness on sound pesticides management among the farming families. Project activities will take into account the gender dimension, ensuring women's participation in the capacity development, demonstration, and risk reduction activities at field level. At institutional level, Uruguay has already mainstreamed gender dimensions in the public sector and women are equally represented and present in public decisions.

5.2. ENVIRONMENTAL SUSTAINABILITY

By safeguarding and safely disposing of obsolete pesticides stocks, including POPs, and associated waste, the project will be removing key source contaminants from the environment. The project also aims to prevent future accumulation of obsolete stocks and to reduce the use of highly hazardous pesticides by building the capacity at all critical levels (policy, institutional and production sector). Reduction of pesticide use through IPM conserves biodiversity and reduces pesticide contamination of the environment.

POPs and other obsoletes are currently stored in unsuitable conditions and represent a high risk to human health and the environment. The project will support the country in re-packing, transporting and destroying these stocks in an environmentally sound manner, in compliance with the Stockholm Convention and the Basel Convention on the

Transboundary Movement of Hazardous Wastes, mitigating the risk of being released to the environment. To promote the sustainability of these activities, local staff will be trained in the safeguarding of obsolete stocks, identification and remediation of contaminated sites, ensuring that they acquire the necessary skills. These benefits are consistent with the objectives of the GEF, the objectives of the Millennium Development Goals, and Uruguay's environmental and sustainable development priorities.

5.3. FINANCIAL AND ECONOMIC SUSTAINABILITY

This project will promote sustainable intensification of farming systems, contributing to the financial and economic sustainability of farmers. To reduce demand for POPs and highly hazardous pesticides, the project will research, pilot and promote viable alternatives for key crops, in an effort to drive long-term uptake of such non-toxic alternatives. Agricultural production carried out in compliance with IPM approach contributes to high quality crops that are highly competitive within the international marketplace.

This project will develop alternatives to conventional chemical pesticides by supporting the validation of new technologies, and the implementation of a network of integrated demonstration units that promote improved pest control practices. Furthermore, the elimination of POP, high toxicity pesticides and empty containers with the active participation of the private sector will contribute to solve a major environmental problem faced by small- and medium-sized producers, without having to assume high costs for packaging and transport.

5.4. SUSTAINABILITY OF CAPACITIES DEVELOPED

This project will help enhance national institutions' capacities in pesticides registration and control, ERA application, IPM at field level, and risk reduction strategies. The ToT methodology (training-of-trainers will help disseminate and sustain the knowledge among other practitioners and extension agents, even after project termination. In addition, the update of quality control techniques in laboratories will improve national capacity for pesticide analysis that will endure after PY4. Capacity development activities also includes the training and cooperation with the private sector and NGO's representatives, in particular to promote alternatives to highly hazardous pesticides; and the training of key institutional and private stakeholders in the management of containers to avoid the generation of new waste stockpiles.

In addition, the project will promote information-sharing with other countries in the region, contributing to and benefiting from a network of individuals and institutions with recognized skills in the lifecycle pesticides management.

5.5. APPROPRIATENESS OF TECHNOLOGY INTRODUCED

The proposed technologies are relevant to the climate and ecological conditions of Uruguay and its project areas. Therefore, the experimental activities on less toxic alternatives will focus on affordable, inexpensive and readily available technologies, in

order to demonstrate their effectiveness at country level, and to ensure that they are within the reach of low- and medium-income farmers. Techniques of rinsing, packaging and recycling of containers are already tested in Uruguay and will be promoted through private sector partners.

During full project preparation, a list of potential technologies was analyzed. They are listed in Table 7.

Table 7: Potential technologies to be promoted by the project in Uruguay

Technologies considered	Relevance
High temperature incineration of obsolete POP pesticides and associated wastes	? Expensive, but appropriate for high-risk obsolete pesticides that cannot be safely disposed in Uruguay. ? Not appropriate for wastes that can be safely managed in Uruguay, for example soils
Triple rinsing of containers with organic solvents and recycling of empty containers.	? Increases overall cleanliness rate by over 90% ? Restricts the re-use of empty containers and therefore, intoxication cases ? Provides possibilities for recycling plastic and metal materials and using them for non-food purposes.
Extension of the use of the Pesticide Stock Management System (PSMS) nationwide	? It makes possible to ensure daily monitoring of pesticide stocks and their evolution ? Facilitates management of stocks within the framework of risk management plans ? Facilitates ready access of the stakeholders to information about pesticides (i.e. lists of registered pesticides, withdrawal of pesticides, and other useful information)
Bioremediation and phyto-remediation of soils contaminated with pesticides	? Minimizes any contribution to the contamination of the environment ? Utilizes local materials (organic manures, native plants, etc.) ? Develops local and regional expertise ? Significantly less expensive than "dig and dump" method (involving offshore disposal)
Alternatives to conventional chemical pesticides	? Provides non-hazardous products ? Efficiency tested and proven for controlling a number of target pests ? Accessible through either local production or regulated importation

Source: Project preparation team and FAO, 2014

5.6. REPLICABILITY AND SCALING UP

The project will implement demonstration activities of rational use and/or alternatives to the major pesticides used in Uruguay, the handling of containers and the eventual decontamination of soils. The practices identified and promoted by the project are expected to be adopted by most users of pesticides, both in the priority areas of the project and in remaining regions of Uruguay, as well as in neighbouring countries facing

similar challenges. For this purpose, an ambitious communication and awareness plan, as well as the dissemination of results from field activities, will be designed and implemented by PY4.

APPENDICES

APPENDIX 1: RESULTS MATRIX

Project objectives and outcomes: [21]

Objectives	Baseline	Outcome indicators	Assumptions
1. To safely dispose obsolete pesticides, including POPs. **2. To strengthen the capacity for the integrated life cycle management of pesticides in Uruguay.**	Component 1: Volumes of obsolete pesticides in Uruguay are low. However, these products are highly dispersed throughout the country, stored in warehouses of distributors, contractors and farmers, requiring considerable resources for their location, identification collection and destruction. Agricultural intensification in recent years has resulted in a substantial increase in the amount of pesticide use and contaminated containers. While there are specific and innovative initiatives to address this situation, GOU requires additional resources to eliminate existing knowledge, logistics and operational barriers	Component 1: Reduced risks to human health and the environment through the safe disposal of persistent organic pollutants and other obsolete pesticides, and the removal of pesticide containers. Improved capacities of the main stakeholders, including DINAMA, MGAP, and *Campo Limpio*, to manage POPs, contaminated sites, and empty containers Substantial volume of polluting organic persistent and other organic pesticides safeguarded and eliminated in an environmentally effective manner *TT CHEM indicator 1.4.2: Obsolete pesticides, including POPs pesticides, disposed of in an environmentally sound manner: 160 Tons* *TT CHEM indicator 1.4.2.4: Waste management plans to prevent further accumulation of pesticide stockpiles and empty pesticide containers, in place: Target 3: Management Plans budgeted and implemented*	Component 1: Management plans (i) of obsolete pesticides and (ii) for disposal of containers, are approved by DINAMA and executed by the private sector. Holders of pesticides (distributors, contractors, farmers, etc.) report and make available their stocks. Public institutions (Customs, ANCAP. AFE, MTOP, etc.) collaborate in the preparation of an inventory of obsolete pesticides stored in State facilities
	Component 2: The existing regulatory framework is detailed and comprehensive, but	Component 2: Legislative and regulatory framework for the environmentally sound management of POPs is	Component 2: GoU is willing to review and amend their national legislation.

[21] Please insert/delete rows for components as needed

	fragmented and sectoral and does not meet the current production intensification challenges.	improved. Improved Registration for all pesticides is developed in the context of the reactivation of the Inter-ministerial Group created by Decree 132/11 *TT CHEM indicator 1.4.2.3: Pesticides or POPs pesticides regulations in place: Target 3: Regulation is enforced with corresponding Budget*	Institutions contribute to the reactivation and operation of the inter-ministerial group. The review process is completed within the life of the project.
	Component 3: Uruguay has experienced a strong expansion of forage and agricultural crops. This growth has been accompanied by an explosive increase in the use of inputs, including fertilizers and pesticides. In response to this expansion, in recent years there has been an improvement in the use and handling of pesticides, as a result of public and private programs. These initiatives have had a fragmented nature lacking an integrated approach that incorporates environmental, technological, operational, productive and trade priorities.	Component 3: Alternatives to less toxic pesticides and good management practices and application validated by applied research Producers and contractors correctly using less toxic pesticide *200 Tones of toxic pesticides replaced in major crops*	Component 3: National and international research and academic institutions have technological alternatives viable and suitable for crops in Uruguayan conditions The public institutions responsible for productive and environmental policies, and the private sector, including producer organizations are willing to work jointly and coordinated.

Project outcomes and outputs:[22]

	Indicator		Milestones towards achieving output and outcome targets				Data Collection and Reporting	
	Baseline[23]	**Target**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
Component 1: Reduction of stocks and elimination of obsolete pesticides and containers								
Outcome 1.1 Risks to human health and the environment reduced through safe disposal of POPs and obsolete pesticides and through built capacities on remediation of pesticide-contaminated soil	Risk level: High risk (according to DINAMA and MSP assessment) *TT CHEM indicator 1.4.2: Obsolete pesticides, including POPs pesticides, disposed of in an environmentally sound manner: 0 Tons* *TT CHEM indicator 1.4.2.4: Waste management plans to prevent further accumulation of pesticide stockpiles and empty pesticide containers, in place: Target 1: Management plans have been developed*	Risk level: Medium-High risk (according to DINAMA and MSP assessment) *TT CHEM indicator 1.4.2: Obsolete pesticides, including POPs pesticides, disposed of in an environmentally sound manner: 160 Tons* *TT CHEM indicator 1.4.2.4: Waste management plans to prevent further accumulation of pesticide stockpiles and empty pesticide containers, in place: Target 3: Management Plans budgeted and implemented*				Risk level: Medium-High risk (according to DINAMA and MSP assessment) *TT CHEM indicator 1.4.2: 160 Tons* *TT CHEM indicator 1.4.2.4: Target 3: Management Plans budgeted and implemented*	Six-monthly Project Progress Reports (PPRs) Surveys Laboratory champions	DINAMA Project Coordination Unit (UCP) / Project Coordinator (PC) MSP MGAP
Output 1.1.1		10 Trainers	10				Progress	DINAMA

[22] Please insert/delete columns for project years and rows for outputs and outcomes as needed.
[23] Value in the case of quantitative indicators and description of situation in the case of qualitative indicators. Please insert the year of the baseline

	Indicator		Milestones towards achieving output and outcome targets				Data Collection and Reporting	
	Baseline[23]	**Target**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
MGAP and DINAMA trainers trained in inventory planning, safeguard and storage of hazardous waste. and environmental assessment of contaminated sites		prepared					reports on Project Training Plan PPRs	UCP / PC
Output 1.1.2 Staff of DINAMA, MGAP, FAGRO and local governments are trained in obsolete pesticides and contaminated sites	0 staff	70 staff	20 staff	30 staff	10 staff	10 staff	Progress reports on Project Training Plan PPRs	DINAMA UCP / PC
Output 1.1.3 Completed inventory of stocks of obsolete pesticides, including POPs		Annual inventory of public and private stocks	0	1	1	1	Progress reports	CAMPO LIMPIO
Output 1.1.4 Strengthened capacity of the private sector for the elimination of obsolete pesticides, including POPs		160 Tons of obsolete pesticides including POPs, disposed of accordance with the Basel and Stockholm Conventions		50 Tons	60 Tons	50 Tons	Certification of embarkation and/or destruction Notifications to the Basel	DINAMA CAMPO LIMPIO UCP / PC

	Indicator		Milestones towards achieving output and outcome targets				Data Collection and Reporting	
	Baseline[23]	**Target**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
and empty containers		30 members of producer and agrochemical business organization trained in obsolete management (annually) 30 operators and technicians trained in container management (annually)	30 members of producer and agrochemical business organization trained 30 operators and technicians trained	30 members of producer and agrochemical business organization trained 30 operators and technicians trained	30 members of producer and agrochemical business organization trained 30 operators and technicians trained	30 members of producer and agrochemical business organization trained 30 operators and technicians trained	Convention Progress reports on Project Training Plan PPRs	
Output 1.1.5 Empty Container management strengthened, extending the network of collection centers and recycling facilities.	10% % of containers generated annually are triple washed, collected and recycled 8 collection centers operating with limitations of location, structure, equipment and personnel	50% of empty containers treated and recycled 12 fully operational, well equipped and staffed collection centers	20% 9 collection centers	30% 10 collection centers	40% 11 collection centers	50% 12 collection centers	Campo Limpio Annual Reports PPRs	DINAMA CAMPO LIMPIO UCP / PC
Outcome 1.2 Capacities	No capacity building programme in place	Enhanced capacities of private sector		Capacity development		Enhanced capacities	PPRs	DINAMA

	Indicator		Milestones towards achieving output and outcome targets				Data Collection and Reporting	
	Baseline[23]	**Target**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
developed for site remediation		organizations		program operating and delivering			Capacity index surveys MVTOMA reports	UCP / PC
Output 1.2.1 Guidelines for private sector, including specific site remediation proposals	No guidelines	Guidelines for developing site specific proposals		1			Guidelines developed and published	DINAMA CAMPO LIMPIO

	Indicator		Milestones towards achieving output and outcome targets				Data Collection and Reporting	
	Baseline	**Target**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
Component 2: Strengthening the legal framework and institutional capacity for the rational and integral management of pesticides throughout their lifecycle								
Outcome 2.1 Legislative and regulatory framework for the environmentally sound management of POPs and pesticides is improved	*TT CHEM indicator 1.4.2.3: Pesticides or POPs pesticides regulations in place: Target 2: Regulation adopted but is not enforced*	*TT CHEM indicator 1.4.2.3: Pesticides or POPs pesticides regulations in place: Target 3: Regulation is enforced with corresponding Budget*			*TT CHEM indicator 1.4.2.3: Target 3: Regulation is enforced with corresponding Budget*		PPRs Regulation and budget reports	DINAMA MGAP UCP / PC
Output 2.1.1 Pesticide regulations reviewed and updated		A proposal to update legislation and regulations participatory built	1 proposal		Updated existing regulation		Proposal approved by GoU	DINAMA-MGAP UCP / PC

	Indicator		Milestones towards achieving output and outcome targets				Data Collection and Reporting	
	Baseline	**Target**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
Component 2: Strengthening the legal framework and institutional capacity for the rational and integral management of pesticides throughout their lifecycle								
		Updated existing regulation						
Output 2.1.2 Current registration and authorization system assessed, gaps and capacity building needs identified and measures implemented		New registration and authorization system approved and implemented	-	-	1 registration system updated		System adopted by GoU	DINAMA-MGAP PC
Output 2.1.3 ERA models included in the training of institutions	ERA currently not part of training plans	At least 10 officials from DINAMA and MGAP trained in ERA. Overall ERA training plan designed 6 Trained officers of the different laboratories working with pesticides on the value and application of ERA as support to the analysis of	ERA guidelines developed ERA included in the training modules	At least 10 officials from DINAMA and MGAP trained in ERA. 6 Trained officers of the different laboratories working with pesticides on the value and application of ERA as support to the analysis			Progress reports on Project Training Plan PPRs	DINAMA-MGAP UCP / PC

	Indicator		Milestones towards achieving output and outcome targets				Data Collection and Reporting	
	Baseline	**Target**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
Component 2: Strengthening the legal framework and institutional capacity for the rational and integral management of pesticides throughout their lifecycle								
		residues.		of residues.				
Output 2.1.4 Adoption of the environmental risk Assessment (ERA) tool to support the registration of pesticides	ERA not utilized systematically	ERA incorporated in the models of the methodology of registration and recording of pesticides. Parameters of eco-toxicity from ERA models added to the registration of pesticides. ERA models used to support the monitoring of demonstration farms and plots			ERA incorporated in the models of the methodology of registration and recording of pesticides. Parameters of eco-toxicity from ERA models added to the registration of pesticides.	ERA models used to support the monitoring of demonstration farms and plots	PPRs and PIRs	DINAMA MGAP UCP / PC
Output 2.1.5 ERA performed to assess at least three highly used active ingredients	Glyphosate and Endosulfan were evaluated with JICA support	ERA applied to evaluate at least three of the most widely used active ingredients	ERA applied to evaluate one ingredient	ERA applied to evaluate one ingredient	ERA applied to evaluate one ingredient		PIRs	DINAMA/MGAP UCP / PC
Output 2.1.6: Improved pesticide information	0	National database designed and implemented		1 national database			Database Reports PIRs	DINAMA UCP / PC

	Indicator		Milestones towards achieving output and outcome targets				Data Collection and Reporting	
	Baseline	**Target**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
Component 2: Strengthening the legal framework and institutional capacity for the rational and integral management of pesticides throughout their lifecycle								
system	0	Outreach strategy developed			Outreach strategy developed and disseminated		PPRs and PIRs	DINAMA UCP / PC

	Indicator		Milestones towards achieving output and outcome targets				Data Collection and Reporting	
	Baseline	**Target**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
Component 3: Promoting Integrated Pest Management (IPM), pesticide sound use and management, and other alternative to hazardous pesticides, through demonstration units								
Outcome 3.1 The use of toxic pesticides reduced through the adoption of IPM and other alternatives		*200 tons of reduced toxic pesticides*	50 tons reduced/year	50 tons reduced/year	50 tons reduced/year	50 tons reduced/year	PPRs and PIRs Field surveys and reports	DINAMA MGAP UCP / PC
Output 3.1.1 IPM strategies and other alternatives for priority crops developed and field tested	No strategies available	Strategies developed & validated	3 strategies developed	3 strategies validated			Consultant reports; validation workshops PIRs	UCP / PC DINAMA MGAP
Output 3.1.2 Two alternatives to highly toxic pesticides identified, evaluated, tested, including IPM and ICM		Studies completed to identify alternatives to the major pesticides Number of demonstration areas applying alternatives to highly toxic pesticides	3 areas	1 alternative assessed 6 areas	1 alternative assessed 6 areas	6 areas	Studies completed PPRs and PIRs Progress Reports & Field Days	DINAMA MGAP UCP / PC

	Indicator		Milestones towards achieving output and outcome targets				Data Collection and Reporting	
	Baseline	**Target**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
Component 3: Promoting Integrated Pest Management (IPM), pesticide sound use and management, and other alternative to hazardous pesticides, through demonstration units								
		Development of Bio-monitoring systems		1 Bio-monitoring demo system				
Output 3.1.3: Training in practices of IPM and application of alternatives to toxic pesticides delivered to agriculture workers, and farmers/producers		1,200 farmers and workers trained	150	450	450	150	PPRs	UCP / PC DINAMA
Outcome 3.2 Increased awareness on effects of conventional pesticides and on alternatives available.	Low level awareness (as assessed by DINAMA)	Medium-level (as assessed by DINAMA)				Increased awareness as perceived by officials and producers	PPRs Awareness Level surveys	DINAMA MGAP UCP / PC
Output 3.2.1 A communication strategy developed and implemented to raise awareness on the effects of pesticides on human health and the environment and support dissemination of good practices	No communication strategy	Communication strategy	Communication strategy created Publication and video developed Training module developed	Communication strategy disseminated through 20 workshops	Communication strategy disseminated through 30 workshops	Communication strategy disseminated through 50 workshops	PPRs Progress Training Reports	DINAMA MGAP UCP / PC

	Indicator		Milestones towards achieving output and outcome targets				Data Collection and Reporting	
	Baseline	**Target**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
Component 4: Strengthening environmental monitoring and response to risks from hazardous pesticides								
Outcome 4.1 Enhanced capacity for monitoring and timely response to pesticide risks to human health and the environment	Medium-low level of capacities (as measured by DINANA and MSP)	Medium-level of capacities (as measured by DINANA and MSP)				Medium-level of capacities (as measured by DINANA and MSP)	PPRs Surveys conducted by MSP and DINAMA Monitoring plans in place	DINAMA UCP / PC MSP
Output 4.1.1 A coordination mechanism for environmental monitoring and response to pesticide risks established	0 inter-institutional agreement	Inter-institutional agreement between MGAP, DINAMA, LATU, UdelaR and Department authorities Watershed monitoring plans prepared, implemented and monitored	1 agreement 3 Watershed monitoring plans prepared	3 Watershed monitoring plans implemented	3 Watershed monitoring plans implemented and monitored		Agreement approved and published Watershed monitoring plans PPRs and PIRs	DINAMA UCP / PC
Output 4.1.2 Harmonized technical and analytical requirements for monitoring pesticide contaminants in environmental matrices (soil, water, sediments and biota) defined	No harmonized requirements	Trained laboratory personnel Laboratories in DINAMA, DGSA and MSP working effectively and coordinated Harmonized	16 staff trained 0 1	-	3 Laboratories	3 Laboratories	Progress reports on Project Training Plan PPRs and PIRs	DINAMA/DGSA/ MSP UCP /PC

	Indicator		Milestones towards achieving output and outcome targets				Data Collection and Reporting	
	Baseline	**Target**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Means of verification**	**Responsible for Data Collection**
Component 4: Strengthening environmental monitoring and response to risks from hazardous pesticides								
		requirements	harmonized protocol					
Output 4.1.3 Detailed action protocol for responding to contamination risks and events developed		Systems and procedures for the receipt of complaints, including citizen control. New action plan		1 system	New action plan implemented		Approval and dissemination of the system and procedures PIRs	DINAMA UCP / PC
Output 4.1.4 Strengthened institutional capacity for environmental monitoring of pesticides	0	Officers from DINAMA, MGAP, & Departments are trained in environmental monitoring of pesticides	0	40 officers	40 officers	20 officers	Progress reports on Project Training Plan PIRs	DINAMA UCP / PC
Output 4.1.5 Sites in at least 3 watersheds selected for monitoring and analysis of pesticide contamination	Current Watershed Environmental Plans do not measure pesticides	Pesticide contamination levels measured as part of environmental plan in 3 watersheds		Representative sampling and reporting conducted	Representative sampling and reporting conducted	Representative sampling and reporting conducted	Watershed Management Progress Reports	DINAMA OSE OCP /PC
Output 4.1.6 Measures to minimize pesticide contamination in watersheds identified and implemented		Guidelines for farmers updated to incorporate pesticide use and management		Guidelines developed & disseminated in Santa Lucia Watershed	Guidelines developed & disseminated in remaining strategic watersheds	Guidelines developed & disseminated in remaining strategic watersheds	Watershed Management Progress Reports PPRs	DINAMA, RENARE, OSE OCP / PC

APPENDIX 2: WORK PLAN

PC: Project Coordinator. UCP: Project Coordination Unit.

Output	Activities	Responsible	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1																		
Output 1.1.1 MGAP and DINAMA trainers trained in inventory planning, safeguard, storage and transport of hazardous waste. and environmental assessment of contaminated sites	Training Plan Preparation	DINAMA UCP / PC																
	Trainers Trained	DINAMA UCP / PC																
Output 1.1.2 Staff of DINAMA, MGAP, FAGRO and local governments trained in obsoletes and contaminated sites	Training Plan Preparation	DINAMA UCP / PC																
	Training Conducted	DINAMA UCP / PC																
Output 1.1.3 Completed inventory of stocks of obsolete pesticides including POPs	Development of a Master Plan	Consultant UCP / PC																
	Development, testing and implementation of the Inventory System	DINAMA Campo Limpio UCP / PC																
Output 1.1.4 Strengthened capacity of the private sector for the elimination of obsolete pesticides and empty containers, including POPs	Training Plan preparation	DINAMA UCP / PC																
	Training Conducted	DINAMA Campo Limpio UCP / PC																
	Disposal of Obsolete Stocks	DINAMA																

Output	Activities	Responsible	Year 1				Year 2				Year 3				Year 4			
			Q 1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Campo Limpio																
Output 1.1.5 Container management strengthened, extending the network of collection centers and recycling facilities.	Container Management Plan preparation	DINAMA Campo Limpio UCP / PC																
	Modernization of existing centers	DINAMA Campo Limpio UCP / PC																
	Establishment of New Centers	DINAMA Campo Limpio UCP / PC																
Output 1.2.1: Guidelines for private sector, including specific site remediation proposals	Guidelines Preparation	DINAMA Consultant UCP / PC																
	Incorporation of the guidelines in training modules	DINAMA UCP / PC																
	Dissemination of guidelines	DINAMA UCP / PC Campo Limpio																
Component 2																		
Output 2.1.1: Pesticides regulations reviewed and updated	Study on Revised Regulation	Legal Expert UCP/PC																
	Update Existing Regulation	Legal Expert UCP/PC																

Output	Activities	Responsible	Year 1				Year 2				Year 3				Year 4			
			Q 1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 2.1.2: Current system of registration and authorization system assessed, gaps and capacity building needs identified and measures to address them implemented	Review current registration system	International consultant UCP/PC DGSA																
	Capacity needs assessment conducted	International consultant UCP/PC DGSA																
	Implementation of improvements in the registration system. Monitoring	UCP/PC DGSA																
Output 2.1.3: ERA models included in the training of institutions	Development of ERA Guidelines	UCP/PC																
	ERA inclusion in the training modules	UCP/PC																
	Training on ERA application	UCP/PC DINAMA MGAP Trainers																
Output 2.1.4: Adoption of ERA tools to support pesticides registration	Incorporation of ERA in the methodology of registration	UCP/PC DINAMA MGAP																
	Adoption of parameters of ecotoxicity in the registration	UCP/PC DINAMA MGAP																
	Use of ERA to monitor demonstration farms	UCP/PC DINAMA MGAP																
Output 2.1.5: ERA performed to assess 3 active ingredients	Active Ingredients identified	UCP/ PC																
	Technical assistance to institutions and private	UCP/PC																

Output	Activities	Responsible	Year 1				Year 2				Year 3				Year 4			
			Q 1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	sector to apply ERA																	
	ERA applied to 3 ingredients and assessment	UCP/PC																
Output 2.1.6: Improved pesticides information system	Development and initial operation of a national database on pesticides	UCP/PC DGSA																
	Development of an outreach strategy	Campo Limpio UCP/ PC DINAMA																
Component 3																		
Output 3.1.1: IPM strategies and other alternatives for priority crops developed and field tested.	Stocktaking exercise	UCP/ PC																
	Selection of d six demonstration sites	UCP/ PC																
	Creation of the demonstration network	UCP/ PC																
	Validation and test of IPM options in the field	UCP/ PC																
	IPM field monitoring	UCP/ PC																
	Field days (two)	UCP/ PC																
Output 3.1.2: Two alternatives to highly toxic pesticides identified, evaluated, tested and demonstrated, including IPM and ICM	Assessment of two alternatives, including IPM and ICM	UCP/ PC FAO																
	Field testing and demonstrations of substitutes, including IPM and ICM plans	UCP/ PC FAO																
	Results monitored and disseminated	UCP/ PC																
Output 3.1.3: Training in practices of IPM and application of alternatives to toxic	Training Plan																	
	Field Days																	

Output	Activities	Responsible	Year 1				Year 2				Year 3				Year 4			
			Q 1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
pesticides delivered to agricultural workers, and farmers/producers.	Training of farmers and TA providers																	
Output 3.2.1: A communication strategy developed and implemented to raise awareness on the effects of pesticides on human health and the environment and support dissemination of good practices	Production of a communication strategy and plan	Communicatio n specialist DINAMA UCP/PC																
	Implementation of the strategy through publications, videos, presentations	DINAMA UCP/PC																
	100 workshops for producers and applicators trained in IPM and good practices of use and management	DINAMA UCP/PC																
Output 4.1.1: A coordination mechanism for environmental monitoring and response to pesticides risks established	Interagency Agreement	MGAP UdelaR DINAMA Watershed committees UCP																
	Preparation of 3 Watershed Monitoring Plans	MGAP UdelaR DINAMA Watershed committees UCP / PC																
	Implementation of 3 watershed monitoring plans	MGAP UdelaR DINAMA Watershed committees UCP /PC																
	Monitoring Implementation	MGAP UdelaR DINAMA																

Output	Activities	Responsible	Year 1				Year 2				Year 3				Year 4			
			Q 1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Watershed committees UCP /PC																
Output 4.1.2: Harmonized technical and analytical requirements for monitoring pesticide contaminants in environmental matrices (soil, water, sediments and biota) defined	Development of a harmonized protocol	Expert UCP/PC DINAMA DGSA																
	Training of laboratory staff	Expert UCP/PC DINAMA DGSA																
	Purchase of laboratory equipment	FAO UCP / PC																
	Soil & water sampling/analysis	DGSA laboratory DINAMA laboratory UCP / PC																
Output 4.1.3: Detailed action protocol for responding to contaminants risks and events, developed	Development of an action protocol, improving the current one	DINAMA UCP / PC																
	Dissemination of the action protocol among institutions	UCP / PC DINAMA																
	Implementation of the new Action Plan	UCP / PC DINAMA																
Output 4.1.4: Strengthened institutional capacity for environmental monitoring of pesticides	Preparation of a Training Plan for monitoring pesticides	Expert DINAMA UCP / PC																

Output	Activities	Responsible	Year 1				Year 2				Year 3				Year 4			
			Q 1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Training of laboratory staff	DINAMA laboratory DGSA laboratory UCP / PC DINAMA																
	Field Training	UCP / PC Expert DINAMA																
Output 4.1.5: Sites in at least 3 watersheds selected for monitoring and analysis of pesticide contamination**.**	Site Selection	UCP / PC DINAMA																
	Site Monitoring & Analysis	UCP / PC DINAMA																
Output 4.1.6: Measures to minimize contaminants in watersheds, identified and implemented	Incorporation of measures in the mandatory procedures followed by the private sector	DINAMA UCP / PC																
	Monitoring the private sector's compliance with the new measures	DINAMA UCP / PC																

APPENDIX 3: RESULTS BUDGET

Oracle Budget
Uruguay POPs 9Feb2

APPENDIX 4: RISK MATRIX

RISK	OCCURRENCE / PROBABILITY	MITIGATION MEASURES
Delays in the adoption of updated norms and procedures, and lack of inter-institutional coordination.	Medium	Campaigns of promotion and awareness raising for Government representatives and staff, the commercial sector and end users. The project will support the operation of the inter-ministerial working group created by MGAP to coordinate actions and assess the current legal framework for the management of pesticides.
Limited collaboration of the private sector and the producers to support the project, in particular shipping containers to collection centers, and identification of stocks of obsolete pesticides and any eventual contaminated sites.	Low	Complementing the activities carried out during the preparation of the project, significant efforts will be devoted during implementation to raising awareness on the effects of obsolete pesticides and the importance of participation of agricultural producers in the project. The commercial sector has already formalized its support to the new regulations for the management of pesticides and expressed its support to the objectives and activities of this project.
The budget available is not sufficient for the environmentally sound disposal of identified stockpiles of obsolete pesticides.	Low	According to current regulations, importers and formulators of pesticides will be responsible for the disposal of obsolete stocks. Should the available budget be insufficient, the private sector will be responsible for the proper storage of pesticides and covering the financial gap.

APPENDIX 5: PROCUREMENT PLAN

Please use format from the "FAO Guide to the Project Cycle"

APPENDIX 6: DRAFT TERMS OF REFERENCE (TORS)

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Draft Terms of Reference

Title	**National Project Coordinator**		
Program/Project Number	GCP/URU/031/GFF: "*Strengthening capacities for the sound management of pesticides including POPs*"		
Country	Uruguay		
Estimated start date	(To be defined)	**Duration:**	1 year (renewable)
Reports to:	FAO Uruguay		

GENERAL DESCRIPTION OF TASKS AND OBJECTIVES

The National Project Coordinator shall perform its tasks under the direct supervision of the National Directorate of Environment (DINAMA), under the supervision of the FAO Representative in Uruguay and the Lead Technical Officer (LTO), and in close collaboration with FAO-GEF Coordination Unit (TCID). The National Project Coordinator will perform his/her duties in DINAMA offices and will have the following responsibilities and tasks:

1. Coordinate the execution of the project in close liaison with DINAMA and FAO.
2. Planning, coordinating and monitoring of project implementation and if necessary, proposing corrective actions for the implementation of activities.
3. Participate with DINAMA and FAO in the selection of staff and consultants.
4. Provide inputs to the LTO for the preparation of the Project Implementation Review (PIR), once a year.
5. Coordinate the contracting of institutions, firms and service providers required for project implementation and monitor their performance. Organize and coordinate different working groups.
6. Coordinate and facilitate the activities of the working groups, particularly in cases involving several institutions.
7. Monitor project work plans and budgets in accordance with FAO/GEF norms and procedures.
8. Prepare periodic reports on progress and financial aspects of the project, according to GEF and FAO and the Secretariat of the Stockholm Convention as required.
9. Cooperate in the end-of-project evaluations and in the preparation of the Final Project Report.
10. Interact with the Inter-Agency Coordination Committee (CCI) of the project and the project coordination unit to plan and assess compliance with project objectives.
11. Assist DINAMA in other activities related to the project implementation, as necessary.

CONTRACT CONDITIONS

a) Candidates may not be civil servants, with the exception of university professors.

b) The position requires a time dedication of 40 hours per week in the modality of a services contract.

c) The monthly amount will be $U [to be defined] (Uruguayan pesos amount in words). The Ministry of Housing, Territorial Planning and Environment (MVOTMA) will act as retention agent of VAT.

d) The Coordinator shall invoice as a sole proprietorship, and must be registered in the single registry of suppliers of the State (RUPE - *WWW.COMPRASESTATALES.GUB.UY)*

KEY PERFORMANCE INDICATORS

Expected Results: Coordinate and ensure the implementation of the activities envisaged in the Project Document within schedule. **Indicators:** Project Progress Reports (PPR), prepared; inputs for the preparation of the PIR, provided yearly; updated Annual Work Plan and Budget (AWP/B).	**End date required:** PPRs**:** on six-monthly basis PIRs: on annual basis AWP/B: on annual basis

MINIMUM REQUIREMENTS

The Coordinator shall have University Degree with a minimum of 10 years of experience in management of multidisciplinary projects. Preferably, he/she must possess: 1) training in project management 2) experience in coordination with different players within the sector (public, private, academic); (3) experience in projects with international organizations; and (4) command of Spanish and English.

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Draft Terms of Reference

Title	**International Expert in Registration Systems for Plant Protection Products**		
Program/Project Number	GCP/URU/031/GFF: "*Strengthening capacities for the sound management of pesticides including POPs"*		
Country	Uruguay		
Estimated start date	(To be defined)	**Duration:**	(to be defined)
Reports to:	FAO Uruguay		

GENERAL DESCRIPTION OF TASKS AND OBJECTIVES

The International Expert in Registration Systems for Plant Protection Products will support the Government of Uruguay in defining a registry model to be adopted in order to incorporate the environmental risk of pesticides. The Expert will perform its tasks under the direct supervision of the National Directorate of Environment (DINAMA), and in close collaboration with the Ministry of Livestock, Agriculture and Fisheries (MGAP), under the supervision of the FAO Representative in Uruguay and the Lead Technical Officer (LTO). The consultant's responsibilities include:

1. Prepare a comparative analysis of registration systems internationally-recognized (including the European Union) which are currently incorporating environmental and health aspects for the evaluation of active ingredients and formulations, as well as applications in crop protection.
2. Analysis of features pre and post registration.
3. Identification of capacities required for implementation.
4. Pre-selection of most appropriate systems applicable to Uruguayan conditions.
5. Primary identification of impacts of the preselected model.
6. Proposal of an initial roadmap.

CONTRACT CONDITIONS

The total amount of the contract is US$ (to be defined) ([amount in words] US dollars), covering consulting fees, international travel, accommodation, daily allowances, visa, airport taxes, local transportation, insurance costs and other costs directly linked to the performance of the tasks described. reimbursable expenses shall not be made.

The payment will be made in the following manner: (schedule of payments to be defined)

The international consultant will be responsible for paying the value added tax (VAT) which amounts to 22% and the income tax for non residents (IRNR) which amounts to 12% and applies on the net amount excluding VAT. These taxes will apply only to the work carried out in the country. Work performed abroad will be taxed according to the rules of the corresponding country.

KEY PERFORMANCE INDICATORS

Expected Results and Indicators: TBC	**End date required:** TBC
MINIMUM REQUIREMENTS	
The international expert must (i) have proven experience in evaluation, approval and registration systems of plant protection products; and (ii) be fluent in English and Spanish.	

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

DRAFT TERMS OF REFERENCE

Title	**Technical Assistant**		
Program /Project Number	GCP/URU/031/GFF: *"Strengthening capacities for the sound management of pesticides including POPs"*		
Country	Uruguay		
Contract start:	(to be defined)	**Contract period:**	(to be defined)
Reports to:	FAO Uruguay		

TASK DESCRIPTION

The Technical Assistant will support the Project in the following tasks:

1. Administrative and operative activities related to the Project that be assigned by the Project Coordinator.
2. Give secretary assistance to the Project Coordination Unit (UCP).
3. Assist the Project Coordinator in the elaboration of the Annual Work Plan and Budget (AWP/B) and Project Progress Reports (PPRs).
4. Organize meetings and workshops and give support during them.
5. Organize and keep record of the project´s information regarding its execution.
6. Keep record of budget execution and support the elaboration of the financial reports
7. Elaborate and present periodical advance reports to the Project Coordinator.
8. Collaborate in the elaboration or technical reports to DINAMA, FAO and GEF.
9. Support the Project in field activities as required.
10. Assist in other activities related to the Project.

CONTRACTUAL REQUIREMENTS

a) The candidates shall not be public servants, except university teachers.
b) The Consultant will work under a service contract with a 40 hours/week dedication.
c) The salary will be $U [to be defined] (Uruguayan pesos *amount in words*). The Ministry for Housing, Land Planning and the Environment (MVOTMA) will retain the corresponding VAT.
d) The consultant will be a one-person-enterprise and will be included in the *Registro Único de Proveedores del Estado* (RUPE - *WWW.COMPRASESTATALES.GUB.UY)*

KEY INDICATORS

Expected Results:	**Final date:**
Administrative and technical secretarial support to the Project and Project Coordinator.	TBC

MINIMUM REQUIREMENTS
The Technical Assistant shall be a graduate student or professional with either an agronomical, chemical, engineering or biology degree with good command of Spanish and English. Environmental background or knowledge will be valued.

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

DRAFT TERMS OF REFERENCE

Title	**Technical Coordinator - Agronomist**		
Program /Project Number	GCP/URU/031/GFF: *"Strengthening capacities for the sound management of pesticides including POPs"*		
Country	Uruguay		
Contract start:	(to be defined)	**Contract period:**	(to be defined)
Reports to:	FAO Uruguay		

TASK DESCRIPTION

The Agronomist will perform the following tasks:

1. Support the analysis of alternatives to POP pesticides o highly hazardous pesticides, to be applied in the network of demonstration units.
2. Provide technical support to the operation of the Agro-chemical Group in MGAP
3. Design, plan, coordinate, implement and monitor all aspects related tothe development and operation of the demonstration units, and the monitoring of watersheds.
4. Provide technical coordination with institutions and farmers for the development of the demonstrative field interventions.
5. Organize and field activities, including field days and training events, based on specific plans to be prepared and submitted for approval.
6. Support the sampling design for field interventions, including the demo network and monitoring of watersheds.
7. Elaborate and submit periodical progress reports to the Project Coordinator.
8. Collaborate in the elaboration or technical reports to DINAMA, FAO and GEF.
9. Support the Project in field activities as required.

CONTRACTUAL REQUIREMENTS

a) The candidates shall not be public servants, except university teachers.
b) The Consultant will work under a service contract with a 40 hours/week dedication (to be confirmed).
c) The fees will be paid in $U [to be defined] (Uruguayan pesos - *amount in words*). The Ministry of Housing, Land Planning and the Environment (MVOTMA) will retain the corresponding VAT.
d) The consultant will be an individual and will be included in *the Registro Único de Proveedores del Estado* (RUPE - *www.comprasestatales.gub.uy)*

KEY INDICATORS

Expected Results:	**Final date:**
Design and operation of Demonstration Units	TBC
Design and Operation of Watershed Monitoring Plan	

Progress reports	
MINIMUM REQUIREMENTS	
The Consultant shall be a professional with agronomical background with good command of Spanish and English. Environmental background and knowledge of pesticide issues will be valued.	

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

DRAFT TERMS OF REFERENCE

Title	**Registration and ERA Specialist**		
Program /Project Number	GCP/URU/031/GFF: *"Strengthening capacities for the sound management of pesticides including POPs"*		
Country	Uruguay		
Contract start:	(to be defined)	**Contract period:**	(to be defined)
Reports to:	FAO Uruguay		

TASK DESCRIPTION

The consultant will assist in the following project tasks:

1. Elaborate a proposal to improve the current pesticide registry system in order to include the environmental risk assessment (ERA).
2. Assist DINAMA and MGAP to adjust such proposal for its implementation.
3. Elaborate the conceptual base and requirements document for a national database for the management of registered and banned pesticides.
4. Assist in the selection and implementation of predictive models applicable to pesticides to be incorporated to DINAMA activities.
5. Assist the Technical Coordinator in the design of the demonstrative field interventions (Component 3) and activities in watersheds (Component 4)
6. Elaborate and present periodical advance reports to the Project Coordinator.
7. Collaborate in the elaboration or technical reports to DINAMA, FAO and GEF.
8. Support the Project in field activities as required.
9. Assist in other activities related to the Project.

CONTRACTUAL REQUIREMENTS

a) The candidates shall not be public servants, except university teachers.
b) The Consultant will work under a service contract with a 40 hours/week dedication.
c) The salary will be $U [to be defined] (Uruguayan pesos *amount in words*). The Ministry for Housing, Land Planning and the Environment (MVOTMA) will retain the corresponding VAT.
d) The consultant will be an individual and will be included in the *Registro Único de Proveedores del Estado* (RUPE - *WWW.COMPRASESTATALES.GUB.UY)*

KEY INDICATORS

Expected Results:	**Final date:**
1. Proposal for the improvement of the current pesticide registry system.	TBC
2. Selection and implementation of predictive models.	

MINIMUM REQUIREMENTS
The consultant shall be a professional with either agronomical, chemical, engineering or biology background, with good command of Spanish and English. Environmental experience and background will be valued.

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

DRAFT TERMS OF REFERENCE

Title	**Training and Dissemination Specialist**(2)		
Program /Project Number	GCP/URU/031/GFF: *"Strengthening capacities for the sound management of pesticides including POPs"*		
Country	Uruguay		
Contract start:	(to be defined)	**Contract period:**	(to be defined)
Reports to:	FAO Uruguay		

TASK DESCRIPTION

The consultant will support the Project in the following tasks:

1. Assist the project team in the definition of the training and dissemination (including communications)activities to be implemented during the Project .
2. Elaborate a Training and CommunicationPlans for Project implementation considering the different target groups.
3. Elaborate a communications strategy.
4. Establish the profile of the media and communicational products needed for the achievement of the objectives.
5. Establish a methodology for the evaluation of the actions.
6. Assist in other activities related to the Project.

CONTRACTUAL REQUIREMENTS

a) The candidates shall not be public servants, except university teachers.
b) The Consultant will work under a service contract with a 40 hours/week dedication.
c) The salary will be $U [to be defined] (Uruguayan pesos *amount in words*). The Ministry for Housing, Land Planning and the Environment (MVOTMA) will retain the corresponding VAT.
d) The consultant will be an individual and will be included in the *Registro Único de Proveedores del Estado* (RUPE - *WWW.COMPRASESTATALES.GUB.UY)*

KEY INDICATORS

Expected Results:	**Final date:**
Training and Communication Plans designed.	TBC

MINIMUM REQUIREMENTS

The Consultant shall be a professional with background in training and communications, as well as knowledge of environmental and agricultural issues.

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

DRAFT TERMS OF REFERENCE

Title	**Laboratory Analyst**		
Program /Project Number	GCP/URU/031/GFF: *"Strengthening capacities for the sound management of pesticides including POPs"*		
Country	Uruguay		
Contract start:	(to be defined)	**Contract period:**	(to be defined)
Reports to:	FAO Uruguay		

TASK DESCRIPTION

The Laboratory Analyst will be supervised by the Head of the Laboratory and will assist the Project in performing the following tasks:

1. Harmonization of analytical methods used by the labs of DINAMA and DGSA.
2. Adjust and implement analytical techniques for pesticides analysis in environmental matrices.
3. Development of analytical protocols.
4. Assist in the design of sampling and monitoring in the demonstrative projects.
5. Perform the administrative and operative tasks related to the analysis as required by the Head of the Laboratory.
6. Elaborate and present periodical advance reports to the Project Coordinator.
7. Collaborate in the elaboration or technical reports to DINAMA, FAO and GEF.
8. Support the Project in field activities as required.

CONTRACTUAL REQUIREMENTS

a) The candidates shall not be public servants, except university teachers.
b) The Consultant will work under a service contract with a 40 hours/week dedication.
c) The salary will be $U [to be defined] (Uruguayan pesos *amount in words*). The Ministry for Housing, Land Planning and the Environment (MVOTMA) will retain the corresponding VAT.
d) The consultant will be an individual and will be included in the *Registro Único de Proveedores del Estado* (RUPE - *WWW.COMPRASESTATALES.GUB.UY)*

KEY INDICATORS

Expected Results:	**Final date:**
Analytical techniques developed and implemented.	TBC
Environmental samples, analyzed.	

MINIMUM REQUIREMENTS

The Analyst will be an advanced student or professional with chemical o chemical engineering background, with a working knowledge of Spanish. Working experience in contaminant analysis by gas and/or liquid chromatography will be valued.

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

DRAFT TERMS OF REFERENCE

Title	**Legal Expert**		
Program /Project Number	GCP/URU/031/GFF: *"Strengthening capacities for the sound management of pesticides including POPs"*		
Country	Uruguay		
Contract start:	(to be defined)	**Contract period:**	6 months
Reports to:	FAO Uruguay		

TASK DESCRIPTION

The consultant will assist the Project by performing the following tasks:

1. Elaborate a proposal for the improvement of the existing legal framework applicable to the pesticides during its life cycle.
2. Assist DINAMA and MGAP in adjusting the legal proposal to implement it.
3. Elaborate and present periodical advance reports to the Project Coordinator.
4. Collaborate with the elaboration of technical reports to DINAMA, FAO and GEF.
5. Support the Project in field activities as required.
6. Assist in other activities related to the Project.

CONTRACTUAL REQUIREMENTS

a) The candidates shall not be public servants, except university teachers.
b) The Consultant will work under a service contract with a 40 hours/week dedication.
c) The salary will be $U [to be defined] (Uruguayan pesos *amount in words*). The Ministry for Housing, Land Planning and the Environment (MVOTMA) will retain the corresponding VAT.
d) The consultant will be an individual and will be included in the *Registro Único de Proveedores del Estado* (RUPE - *WWW.COMPRASESTATALES.GUB.UY)*

KEY INDICATORS

Expected Results: TBC	**Final date:** TBC

MINIMUM REQUIREMENTS

The consultant will be a lawyer with environmental background. Knowledge and experience in pesticides will be valued.

Draft Terms of Reference:
ADMINISTRATIVE AND OPERATIONS OFFICER

Under the general supervision of the FAO Representative in Uruguay (Budget Holder) and in close collaboration with the Project Coordinator, and the executing partners, the Administrative and Operations Officer will take the operational responsibility for timely delivery of the project outcomes and outputs. In particular, he/she will perform the following main tasks:

1. Ensure smooth and timely implementation of project activities in support of the results-based work plan, through operational and administrative procedures according to FAO rules and standards;
2. Coordinate the project operational arrangements through contractual agreements with key project partners;
3. Arrange the operations needed for signing and executing Letters of Agreement (LoA) and Government Cooperation Programme (GCP) agreement with relevant project partners, as required;
4. Maintain inter-departmental linkages with FAO units for donor liaison, Finance, Human Resources, and other units as required;
5. Day-to-day manage the project budget, including the monitoring of cash availability, budget preparation and budget revisions to be reviewed by the Project Coordinator, and Project Coordination Unit (UPC);
6. Ensure the accurate recording of all data relevant for operational, financial and results-based monitoring;
7. Ensure that relevant reports on expenditures, forecasts, progress against work plans, project closure, are prepared and submitted in accordance with FAO and GEF defined procedures and reporting formats, schedules and communications channels, as required;
8. Execute accurate and timely actions on all operational requirements for personnel-related matters, equipment and material procurement, and field disbursements;
9. Participate and represent the project in collaborative meetings with project partners and the CCI/Project Steering Committee, as required;
10. Undertake missions to monitor the outputs-based budget, and to resolve outstanding operational problems, as appropriate;
11. Be responsible for results achieved within her/his area of work and ensure issues affecting project delivery and success are brought to the attention of higher level authorities through the BH in a timely manner,
12. In consultation with the FAO Evaluation Office, the LTU, and the FAO-GEF Coordination Unit, support the organization of the mid-term and final evaluations, and provide inputs regarding project budgetary matters;
13. Undertake any other duties as required.

Minimal requirements:

a) University Degree in Economics, Business Administration, or related fields.
b) Five years of experience in project operation and management related to natural resources management, including field experience in developing countries.
c) Proven capacity to work and establish working relationships with government and non-government representatives.
d) Knowledge of FAO's project management systems.

Location: Montevideo
Duration: 48 months
Language: Spanish

APPENDIX 7: ENVIRONMENTAL IMPACT ASSESSMENT

Environmental and Social Review Form (ESRF)


EIA-Uruguay.pdf