Part I: Project Information

Name of Parent Program
Financing Agrochemical Reduction and Management (FARM)

GEF ID
10901

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Financing Agrochemical Reduction and Management (FARM) in Ecuador

Countries
Ecuador

Agency(ies)
UNDP

Other Executing Partner(s)
Ministry of Environment and Water of Ecuador

Executing Partner Type
Government

GEF Focal Area
Chemicals and Waste

Sector

Taxonomy

Pesticides, Chemicals and Waste, Focal Areas, DDT - Vector Management, DDT - Other, Plastics, Sound Management of chemicals and waste, Green Chemistry, Persistent Organic Pollutants, Uninentional Persistent Organic Pollutants, New Persistent Organic Pollutants, Hazardous Waste Management, Waste Management, Best Available Technology / Best Environmental Practices, Influencing models, Strengthen institutional capacity and decision-making, Demonstrate innovative approache, Deploy innovative financial instruments, Convene multi-stakeholder alliances, Transform policy and regulatory environments, Stakeholders, Private Sector, Large corporations, Capital providers, SMEs, Civil Society, Trade Unions and Workers Unions, Non-Governmental Organization, Academia, Local Communities, Communications, Behavior change, Public Campaigns, Awareness Raising, Beneficiaries, Gender Equality, Gender results areas, Access to benefits and services, Capacity Development, Knowledge Generation and Exchange, Participation and leadership, Access and control over natural resources, Gender Mainstreaming, Gender-sensitive indicators, Women groups, Sex-disaggregated indicators, Capacity, Knowledge and Research, Learning, Theory of change, Indicators to measure change, Adaptive management, Knowledge Generation, Workshop, Seminar, Training, Master Classes, Course, Professional Development, Innovation

Rio Markers

Climate Change Mitigation

No Contribution 0

Climate Change Adaptation

No Contribution 0

Biodiversity

No Contribution 0

Land Degradation

No Contribution 0

Submission Date

12/10/2022

Expected Implementation Start

12/8/2023

Expected Completion Date

12/8/2028

Duration

60In Months

Agency Fee($)

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CW-1-2	Sound management of chemicals and waste addressed through strengthening the capacity of sub-national, national and regional institutions and strengthening the enabling policy and regulatory framework in these countries	GET	4,000,000.00	26,878,386.00
		Total Project Cost($)	**4,000,000.00**	**26,878,386.00**

B. Project description summary

Project Objective

The GEF financed project (Grant: USD 4,000,000; Co-financing: USD 26,878,386), implemented by the Ministry of Environment, Water and Ecological Transition (MAATE) with support of the United Nations Development Programme (UNDP), aims to reduce the global use of harmful agrochemicals by supporting farmers to access finance, innovative and sustainable production practices, and competitively access consumer markets in Ecuador. The project is structured in in four components and the following main outcomes: ? Policy and investment frameworks incentivize reduction in use of harmful agrochemicals; and regulatory frameworks enhance sound agricultural chemicals management. ? Widespread adoption of innovative safer alternatives and sustainable agricultural practices reduce demand for agrochemicals and effectively replace them. and agrochemical waste identified, and sustainably managed through strengthened waste management reduction or recycling systems- ? Information & Knowledge Management (KM) platforms catalyse evidence-based decision-making and investments; and enhance FARM scale-up, replication and impact. ? M&E activities, management, implementation, and adaptive management. The project will provide Global Environmental Benefits in terms of reducing 783 MT of POPs pesticides and 1917 MT of HHP; 1,128 MT GHG and 19.7 gTEq of emissions from agricultural activity, benefiting the inhabitants of the country.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 1: Government policy and enforcement	Technical Assistance	Policy and investment frameworks incentivize reduction in use of harmful agrochemicals; and regulatory frameworks enhance sound agricultural chemicals management.	1.1. Training and outreach with customs authorities to avert illegal imports and trade of hazardous chemicals conducted. 1.2. Capacity of government institutions and the private sector to properly uptake, utilize, and adapt tools such as the FAO Pesticide Registration Toolkit, the International Code of Conduct on the distribution and use of pesticides, among others, that allow the proper enforcement of pesticides/plastic standards. 1.3. Institutional strengthening for the rapid identification of alternatives to agrochemicals with high environmental impact (i.e., HHP), agile registration processes of better products and strengthening of the procurement processes to facilitate the	GET	800,000.00	5,375,677.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 2: Finance and investment.	Technical Assistance	Widespread adoption of innovative safer alternatives and sustainable agricultural practices reduce demand for agrochemicals and effectively replace them. and agrochemical waste identified, and sustainably managed through strengthened waste management reduction or recycling systems	2.1. Economic valuation studies to evaluate the impact of the high per capita and per hectare consumption of agrochemicals in government spending conducted. 2.2. New fiscal incentives that favor reduction and/or substitution of hazardous pesticides explored. 2.3. Strengthening financial capacities to facilitate access to credit for farmers who use good practices. Create financing programs and risk management of value chains, applying concepts of green recovery considering environmental quality criteria (pollution), adaptation and mitigation of climate change. 2.4. Strengthening the capacity of the national extension units under Agrocalidad, Ministry of	GET	2,154,524.00	14,447,133.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 3: Capacity development and knowledge dissemination	Technical Assistance	Information & KM platforms catalyse evidence-based decision-making and investments; and enhance FARM scale-up, replication and impact	3.1 Promotion of participatory research and action in agroecology, to design and implement with farmers and the local population and proposals that increase agricultural sustainability through public and private extension units (Agrocalidad, MAG, Rural Social Security and Private Associations). 3.2 Facilitate the identification, documentation, systematization and dissemination, so that key actors at the national and global level receive, share and apply the knowledge generated by the Project, incorporating an integrated approach that includes the best agricultural practices and non-chemical options. 3.3 Training and capacity building provided. Awareness, dialogue and exchange	GET	665,000.00	4,434,934.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
4. Monitoring and Evaluation (M&E)	Technical Assistance	Monitoring and Evaluation tools and products delivered throughout project?s lifecycle	4.1. M&E and adaptive management applied to assess project performance and GEB impact. 4.2. M&E tools provided to evaluate progress, challenges and lessons learned; and for ensuring future sustainability of achievements made through the project in reducing/ replacing HHPs and waste.	GET	190,000.00	1,276,723.00
				Sub Total ($)	**3,809,524.00**	**25,534,467.00**

Project Management Cost (PMC)

GET	190,476.00	1,343,919.00
Sub Total($)	**190,476.00**	**1,343,919.00**
Total Project Cost($)	**4,000,000.00**	**26,878,386.00**

Please provide justification

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Environment and Water of Ecuador	In-kind	Recurrent expenditures	3,814,640.00
Recipient Country Government	Ministry of Agricuture (MAG)	Grant	Investment mobilized	1,000,000.00
Recipient Country Government	Ministry of Agricuture (MAG)	In-kind	Recurrent expenditures	2,825,783.00
Recipient Country Government	Ministry of Health (MSP)	In-kind	Recurrent expenditures	2,142,000.00
Recipient Country Government	Phyto and Zoo-Sanitary Control Agency (AGROCALIDAD)	Grant	Investment mobilized	1,000,000.00
Recipient Country Government	Phyto and Zoo-Sanitary Control Agency (AGROCALIDAD)	In-kind	Recurrent expenditures	2,274,978.00
Recipient Country Government	CONGOPE	In-kind	Recurrent expenditures	64,459.00
Recipient Country Government	Pedro Mocayo Municipality	In-kind	Recurrent expenditures	1,100,000.00
Recipient Country Government	SENAE	In-kind	Recurrent expenditures	3,728,157.00
Recipient Country Government	ABG	In-kind	Recurrent expenditures	579,456.00
Private Sector	CONAFIPS	Grant	Investment mobilized	2,986,839.00

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Private Sector	CONAFIPS	In-kind	Recurrent expenditures	13,161.00
Private Sector	Crop Protection Industry Association (APCSA)	In-kind	Recurrent expenditures	500,000.00
Private Sector	Ecuadorian Chamber of Agricutlural Innovation and Technology Industry (INNOVAGRO)	Grant	Investment mobilized	750,000.00
Private Sector	Ecuadorian Chamber of Agricutlural Innovation and Technology Industry (INNOVAGRO)	In-kind	Recurrent expenditures	502,055.00
Private Sector	AEBE	In-kind	Recurrent expenditures	1,000,000.00
Civil Society Organization	HEIFER	In-kind	Recurrent expenditures	316,858.00
Other	Universidad T?cnica de Machala (UTMACH)	In-kind	Recurrent expenditures	2,250,000.00
GEF Agency	UNDP Ecuador	Grant	Investment mobilized	30,000.00
			Total Co-Financing($)	**26,878,386.00**

Describe how any "Investment Mobilized" was identified

Investment mobilized Co-financing will support the improvement of existing agriculture production chain to promote the adoption of sustainable practices through the access to green finance (green line credits). The strengthening of current management and disposal agriplastics system (collection center and mill equipment) will be supported allowing farmers the improvement of their waste practices. Finally, through the project ?Comprehensive Project for Agro-productive Diversification and Agricultural Reconversion (PIDARA)? investment mobilized will be destined to increase the agro-productive capacity of small and medium producers, through the diversification and improvement of production systems, articulated with the technological development of the value chains of crops of interest to improve living conditions.

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNDP	GET	Ecuador	Chemicals and Waste	POPs	4,000,000	360,000	4,360,000.00
			Total Grant Resources($)		**4,000,000.00**	**360,000.00**	**4,360,000.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

140,000

PPG Agency Fee ($)

12,600

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNDP	GET	Ecuador	Chemicals and Waste	POPs	140,000	12,600	**152,600.00**
				Total Project Costs($)	**140,000.00**	**12,600.00**	**152,600.00**

Core Indicators

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	0	1128	0	0
Expected metric tons of CO?e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)				
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)		1,128		
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting		2024		
Duration of accounting		10		

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 9 Chemicals of global concern and their waste reduced

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
0.00	2,700.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
DDT		58.00		

Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.3 Hydrochloroflurocarbons (HCFC) Reduced/Phased out (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.6 POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.7 Highly Hazardous Pesticides eliminated

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
	2,642.00		

Indicator 9.8 Avoided residual plastic waste

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 10 Persistent organic pollutants to air reduced

Grams of toxic equivalent gTEQ (Expected at PIF)	Grams of toxic equivalent gTEQ (Expected at CEO Endorsement)	Grams of toxic equivalent gTEQ (Achieved at MTR)	Grams of toxic equivalent gTEQ (Achieved at TE)
	19.70		

Indicator 10.1 Number of countries with legislation and policy implemented to control emissions of POPs to air (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 10.2 Number of emission control technologies/practices implemented (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 11 People benefiting from GEF-financed investments

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female		2,721		
Male		5,079		
Total	0	7800	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

As agreed during the FARM programme design phase, the GEB are measured for 5 years of project implementation and 5 years after project implementation. The methodologies for measuring the GEB were agreed at Global Programme level as follows: Core Indicator 6. Greenhouse Gas Emissions Mitigated (metric tons of CO2e) GHG emissions result from the manufacturing of plastic polymers, therefore reducing the demand for new plastics, either by downcycling, recycling end of life plastics or extending the life of agricultural products will result in a reduction in GHG emissions. The methodology: The reduction in GHG emissions (net) will be calculated using the existing AMS III ? AJ methodology and the associated assumptions from the UNFCCC system. Equation 2 and 4 were used with following assumptions: 100% of plastic for agricultural use in Ecuador is imported. As no detail on type of plastics, it is assumed an average of PET, HDPE, LDPE, PP. As plastic use is expected to increase year on year the baseline target and measure of achievement will be calculated using an estimate of the increase in use of agricultural plastics over the life of the project and 5 subsequent years. For Ecuador the estimation of increase was calculated based on the average increase during 2017-2021: 3.78% Through the implementation of project activities (mainly Output 2.5) new plastic demand will be reduced. A total of 1,200 MT will be downcycled per year (from the 4th year onwards). This means downcycling 2,400 MT (322 GHG emissions mitigated) during 5 years project implementation and 6,000 MT (806 GHG emissions mitigated) 5 years after project completion. Total plastic waste downcycled 8,400 MT and 1,128 GHG emissions mitigated. Core Indicator 10: Reduction, avoidance of emissions of POPs to air from point and non-point sources (grams of toxic equivalent gTEQ) uPOP's are produce by open burning of plastic waste and different types of plastics release different amounts of uPOP?s. Avoiding uPOP?s emissions is achieved by reducing the total amount of plastics being open burnt, either by: improved management of agricultural plastic; extending the life of the plastic, thereby reducing the amount of plastic used; Recycling/Downcycling, to reduce amount of plastic waste to be disposed of; Safe disposal of plastic waste via approved incineration. The UPOPs calculation is done applying the Stockholm Toolkit : Group 6 ? Category b ? Class 2. 400ug TEQ/tonne to air of material burnt, assumption mixed material. The methodology: The model starts by estimating the total volume of agricultural plastics disposed of per year in the country, and the percentage that is open burnt. In Ecuador there are official records on empty plastic containers waste annual generation. Total Agricultural plastic waste generation is estimated based on FAO

report that estimates that pesticides containers represent 3% of total agricultural plastic. 46.9% of containers are burnt as per ?Survey of Surface and Continuous Agricultural Production (ESPAC) 2016? As plastic use is expected to increase year on year the baseline target and measure of achievement will be calculated using an estimate of the increase in use of agricultural plastics over the life of the project and 5 subsequent years. For Ecuador the estimation of increase was calculated based on the average increase during 2017-2021: 3,78% Through the implementation of project activities (mainly Outputs 2.3, 2.4, 2.5, 2.6, 3.1 and 3.3) open burning of plastic waste in agricultural activity will be reduced at least 10 points (national figure decreases to 35%). This means avoiding the burning of 11,495 MT (4.6 gTEQ) of plastic waste during 5 years project implementation and 37,686.4 MT (15.1gtTEQ) of plastic waste 5 years after project completion. Total plastic waste avoided burnt 49,182 MT and 19.7 gTEQ avoided to air. Core Indicator 11. Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment Each Child Project will define the methodology for beneficieries measurement. The detail of the number of Beneficiaries for Ecuador is introduced in Annex 12. It is estimated that 7,800 people (2,721 women and 5,079 men) will benefit from project activities implementation. Core Indicator 9. Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced) Import data over five years will be used to calculate the baseline, this will smooth out annual fluctuations and predict the potential future increase in use of POP?s and HHP?s. As use of pesticides is expected to increase year on year the baseline target and measure of achievement will be calculated using an estimate of the increase in use of pesticides over the life of the project and five subsequent years. For Ecuador the reduction of POPs and HHP will be evidenced mainly through the implementation of the Output 1.3 as well as Outputs 2.3, 2.4, 2.5, 2.6, 3.1 and 3.3. It is estimated that the project will evidence the reduction of 1,000 MT of pesticides (290 MT of POPs and 710 MT of HHP) during 5 years project implementation and will arise to 2,700 MT (783 MT of POPs and 1,917 of HHP) 5 years after project completion. - Additional environmental co-benefits will be assessed as implementation proceeds and in coordination with the overall program.

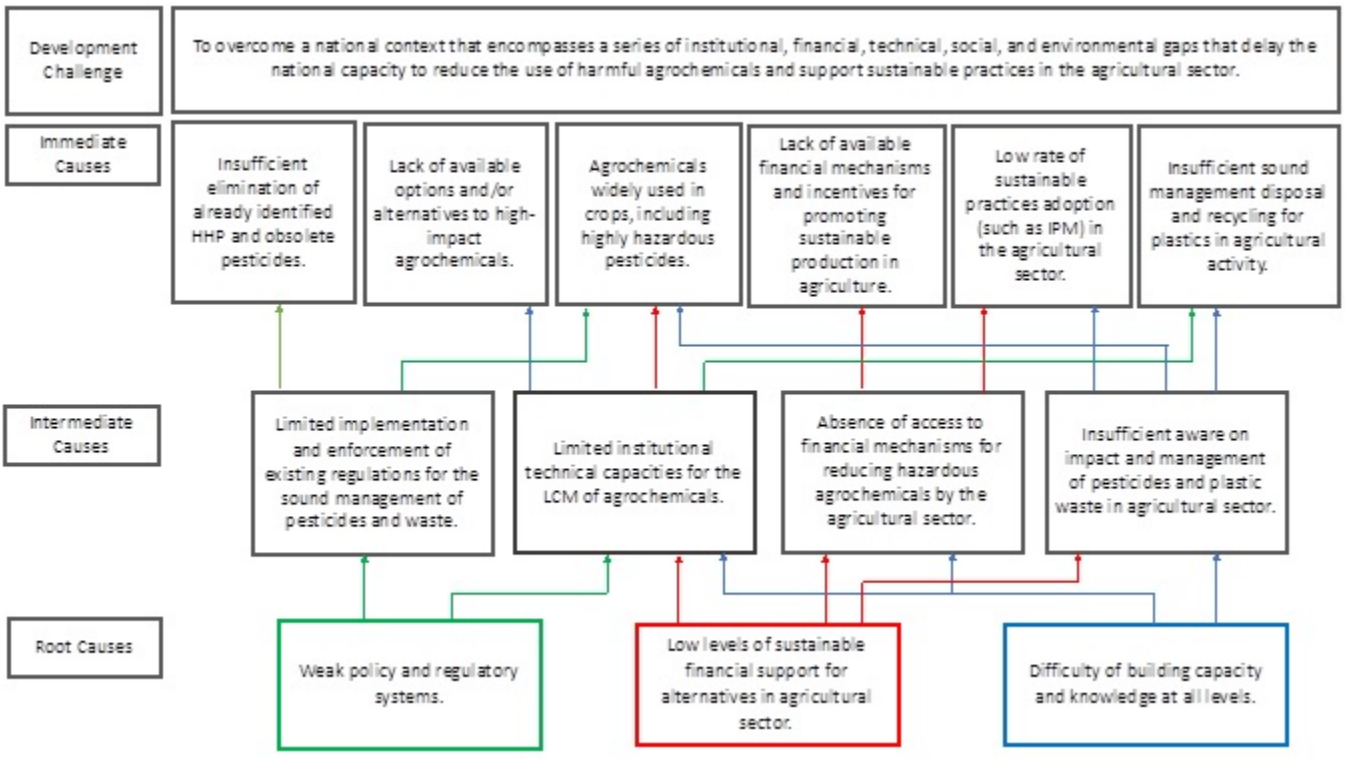
Part II. Project Justification

1a. Project Description

a) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (system description).

The development challenge is to overcome a national context that encompasses a series of institutional, financial, technical, social, and environmental gaps that delay the national capacity to reduce the use of harmful agrochemicals and support sustainable practices in the agricultural sector.

The analysis of the development challenge during PPG phase has identified three levels of causes for environmental sound management and reduce the use of agrochemicals and their waste within the national framework and international commitments. The problem tree with immediate, underlying, and structural/root causes is detailed below:



b) The baseline scenario and any associated baseline projects.

Baseline Scenario

General Background

Ecuador is located in the northwestern part of South America and covers an area of 283,560 km2, with 276,840 km2 on the continent and 6,720 km2 in the ocean. It belongs to the group of 12 megadiverse countries that together represent between 60 and 70% of the planet's biodiversity. In other words, Ecuador has an important and unique natural heritage, which is the basis of its economic, social, cultural, and productive development.

The Ecuadorian territory has four (4) well-differentiated geographical regions (Annex 3): Coast, Andes, Amazon, and Gal?pagos. The Coast, which includes barely more than a quarter of the territory, covers most of the agricultural exports, mainly bananas, coffee, cocoa, and tropical fruits; it also produces sugar, rice, corn, and oilseeds for the domestic market. Agricultural activity is complemented by fishing, shrimp production and livestock. The Sierra or Andean Region is constituted by an Andean stretch of two parallel mountain ranges, between which is the narrow plateau of the inter-Andean valley. Its fundamental economic importance is industry, livestock, and agriculture mainly for the national market, and flower production for export. The Amazon region, east of the Andes in the Amazon Basin, has an important production of livestock, oilseeds, oil that represents the largest source of export income and the jungle constitutes a reserve of great biodiversity. And lastly, the Insular Region, made up of the Galapagos Islands in the Pacific, about 1,050 km from the coast and declared a World Heritage Site by UNESCO, it represents a source of foreign currency income for the country from tourism.

Ecuador is a unitary and decentralized republic according to the National Constitution of 2008. The political-administrative division of the country comprises, from higher to lower hierarchy, provinces (24), cantons (221) and parishes (1,499), which thus constitute the different levels of territorial organization of the Republic.

Based on the latest Population Census (2010) conducted by the National Institute of Statistics and Census (INEC) and projections, Ecuador currently has 17,915,879 inhabitants[1][1] of which 50.1% are men and 49.9% are women. Of the total population, approximately 64% is located in urban while 36% is in rural areas. The provinces which population is mainly concentrated in rural areas are: Bol?var (approximately 71.91% of its population is rural), followed by Cotopaxi (70.57%), Morona Santiago (66.45%), Napo (65 .91%) and Zamora Chinchipe (60.61%).

Institutional and Legal Framework

Ecuador through the Constitution of the Republic (Chapter Seven) is one of the first countries to recognize the rights of nature; in its article 14 establishes the right of the population to live in a healthy and ecologically balanced environment, which guarantees sustainability and good living. Additionally, article 15 prohibits the development, production, possession, marketing, importation, transportation, storage, and use of, among others, highly toxic persistent organic pollutants, and internationally prohibited agrochemicals, harmful to human health or that threaten food sovereignty or ecosystems, as well as the introduction of nuclear waste and toxic waste into the national territory.

In addition to the above, on April 13, 2018, the Organic Code of the Environment (COA) entered into force, which in its Third Book of Environmental Quality - Title IV establishes provisions regarding the comprehensive management of chemical substances, residues, and hazardous and special waste. The

article 215 states that as a preventive measure for the purposes of chemical substances, in case of technical and scientific certainty, the introduction, development, production, possession, marketing, use, transportation, distribution, storage or export of said substance must be restricted or prohibited; and it will be the National Environmental Authority who will analyze the availability of safer products. Likewise, article 222 specifically prohibits the importation and introduction into Ecuadorian territory of chemical substances considered persistent organic pollutants, their mixtures or products that contain them, as well as chemical substances for agricultural and industrial use whose use has been prohibited by international instruments ratified by the State.

The government institutions that have direct competence in pesticide management in Ecuador are the Ministry of the Environment, Water and Ecological Transition (MAATE), the Phytosanitary and Zoosanitary Regulation and Control Agency (AGROCALIDAD), which is attached to the Ministry of Agriculture and Livestock (MAG), and also the Health Regulation, Control and Surveillance Agency (ARCSA) attached to the Ministry of Public Health of Ecuador (MSP).

These three institutions constitute the National Technical Committee on Pesticides (CTNP) (established in Resolution 20 of March 2021): Issuance of the complementary technical manual to facilitate the application of decision 804 of the Andean Community relative to the registration and control of chemical pesticides for agricultural use, Section III, Chapter I). Each institution reviews the files prior to the registration of pesticides for agricultural use (PQUA) in the agronomic, eco-toxicological and toxicological fields, respectively.

Another institution that issues guidelines on pesticide management is the Ecuadorian Standardization Service attached to the Ministry of Production, Foreign Trade, Investment and Fisheries (MPCEIP) through Ecuadorian Technical Standards.

Additionally, the National Customs Service of Ecuador (SENAE) regulates pesticides importation as its institutional function is to control the entry and exit of goods, people and means of transport to and from the country.

AGROCALIDAD, MAATE, MSP and ARCSA, as competent authorities, have published regulations for the phases of pesticide registration, post-registration, storage, transport, use of pesticides, registration of warehouses for pesticide sale, comprehensive management of empty pesticide containers, prohibition of pesticides, among others.

AGROCALIDAD has issued 28 regulations on pesticides, mainly on the prohibition or cancellation of pesticides and on the registration, control, and post-registration of pesticides.

The MAATE has issued 4 regulations on pesticides, 2 mainly related to their management phases such as supply, storage, transport and use, in addition to 2 other regulations on the classification and comprehensive management of hazardous and special pesticide waste (Ministerial Agreement 021 Instructions for the comprehensive management of plastic waste for agricultural use, published in Official Gazette #943 of April 29, 2013).

The MSP through the ARCSA has issued 2 regulations mainly for registration, re-registration, and modification of sanitary products.

Further details can be found in Annex 14 ?Institutional and Legal Framework Analysis?.

International agenda:

With the objective of establishing an environmental sound management of hazardous pesticides within its lifecycle, Ecuador has made significant efforts in the implementation of different international environmental agreements and guidelines. The Government indicates strong willingness to further pursue actions in the same direction.

To address the threats posed by POPs and HHP and related wastes, the Government of Ecuador signed both Rotterdam and Stockholm Convention in 1998 and 2001 respectively. The country is also party of Basel Convention and is a signatory of the Montreal Protocol.

The Stockholm Convention on POPs was ratified on June 7, 2004, and the country prepared a National Implementation Plan (NIP) in 2006 and updated it in 2009. The priorities set in the updated version included: i) Continuous improvement for pesticides management and ii) Reduction of unintentional POPs (UPOPs) emissions among others. Currently the country is conducting the review and update of the NIP.

Ecuador is also a signatory of SAICM, and as such, has undertaken efforts to ensure the effective implementation of the objectives of the Global Plan of Action in the country. The National Action Plan for the Implementation of the Strategic Approach for the Management of Chemical Products (SAICM) aims to progressively reduce the risks to health and the environment associated with Chemical Products throughout their life cycle in a process of continuous improvement, within the framework of sustainable development. It targets: i) Create awareness, sensitize, and train the different groups of society about the risks associated with Chemical Products throughout their life cycle and promoting research; ii) Design intervention strategies to respond to specific problems and establish criteria to achieve the minimization of adverse effects on human health and the environment due to chemical products throughout their life cycle. Iii) Strengthen the institutional framework and coordination between the actors involved for the implementation of the different lines of strategy. The outcomes of this project will contribute, incrementally, to carry out this Plan at the national level.

Likewise, Ecuador is a member country of the Andean Community of Nations (CAN). Through the Andean Technical Committee for Agricultural Health (COTASA), made up of the Official Agricultural Health Services of the Member Countries, it seeks to develop standards, common programmes, and projects with a regional impact to maintain and improve the competitiveness of agricultural production. The Andean work on plant health can be summarized in four main aspects: phytosanitary measures, pests of regional interest, chemical pesticides for agricultural use, activities in international forums.

The Andean Community issued Decision 436/1998 to establish requirements and harmonized procedures for the registration and control of chemical pesticides for agricultural use and to regulate their use and correct handling. The goal is to prevent or minimize damage to health and environment as well as to facilitate trade in the sub-region. Manufacturers, importer, exporters and wholesalers of pesticides for agricultural use must be registered by the competent national authority, and special permits are required for research and scientific experiments.

In a global context, in December 2019, the European Green Deal was launched, with the EU's ambition to be the first climate-neutral continent by 2050. The Farm to Fork Strategy (or F2F) was issued in May 2020 together with the Biodiversity Strategy in Horizon 2030, already incorporating the COVID scenario. The EU will allocate 40% of the Common Agricultural Policy (CAP) funds for F2F actions, for linking food with the health of people, societies, and the planet. Mandatory and binding aspects,

such as the maximum limits of pesticide residues, will be more demanding and a series of nitrogenous and phosphorous agrochemicals, as well as antibiotics, that are traditionally used to ensure plant and animal health, maintaining their productivity, would enter the prohibition lists.

Agricultural sector in Ecuador

In Ecuador, the agricultural sector is of great importance to the economy. Based on the Agricultural Public Information System (SIPA)[2][2], of the total employed population by January 2022, 32% corresponds to the branch of activity that includes agriculture, livestock, hunting, forestry, and fishing, being one of the main sources of employment in the country. Agriculture is also considered one of the main activities that generates large incomes, the participation of this sector compared to Gross Domestic Product (GDP) has made it one of the main pillars of the national economy. According to latest available data, for the year 2020, the national Agricultural Gross Added Value (GVA) contributed 8.25% to GDP [3][3]. Furthermore, the agricultural sector contributes approximately 70% of the food consumed in the country, making it vital for food security and sovereignty[4][4].

The last National Agricultural Census (2000)[5][5] revealed that in Ecuador there are approximately 842,882 Agricultural Production Units (UPAs) in the areas of permanent crops, transient crops, natural pastures, forests, and other uses. Nowadays, as per MAG projections, the number of UPAs would amount to 1 million throughout the territory. Through the National Agricultural Registry (Renagro) the Ministry of Agriculture already started to update this information in November 2020 in pilot sites (Tosagua (Manab?), Carlos Julio Tola Arosemena (Napo), Guamote (Chimborazo) y Catamayo (Loja)). The information resulting from Renagro will constitute a valuable tool to promote efficient management of the sector with differentiated policies to, among others, combat smuggling, target subsidies, reduce vulnerabilities, have early warnings and reactions; serve people in a more orderly way to promote more strategic chains, or warn of trade problems.

Of the total Ecuadorian farmers, 80.4% are producers of 1 to 20 hectares (30% are producers of 1 hectare), which can be considered small and medium farmers. On average, the national composition of agricultural producers [6][6] are 72,97% men and 27,03% are women. Likewise, on average 1.25% correspond to Afro-Ecuadorians; 14.65% indigenous; 70.27% mestizos; 11.16% montubios; 1.50% white; and 1.17% of other ethnic groups.

Based on the agro-productive figures corresponding to the year 2020[7][7], in the country approximately 2.3 million hectares are destined for agricultural use/crop production, 60% for permanent crops and 40% for transient crops. The provinces that engage the highest participation on the national agricultural total area are Guayas (23%); Los R?os (20%); Manab? (14%); Esmeraldas (9%), Santo Domingo de los Ts?chilas (4%) and Sucumb?os (4%), concentrating together 75% of the national crop area (permanent/transient) and belonging mainly to the Coast region. The crops that represent 80% of the

cultivated area are cocoa, dry hard corn, rice, oil palm and banana. whereas the most significant in terms of volume of production (ton) are sugar cane (45%), banana (24.6%), oil palm (10%), rice (5.5%) and dry hard corn (5.3%). Further detail can be found on the following table:

Table 1: Main crops 2020

No.	Product	Planted Area (ha)	Participation in Total Area (%)	Production (t)	Participation in Total Production (%)
1	Cocoa	590,579	25.9%	327,903	1.3%
2	Dry Hard Corn	365,725	16.0%	1,304,884	5.3%
3	Rice	315,023	13.8%	1,336,502	5.5%
4	Oil palm	256,854	11.3%	2,446,312	10.0%
5	Banana	165,080	7.2%	6,023,390	24.6%
6	Banana (pl?tano)	145,501	6.4%	722,298	3.0%
7	Sugar cane	142,010	6.2%	11,016,167	45.1%
8	Dry Soft Corn	58,513	2.6%	88,594	0,4%
9	Coffee	34,789	1.5%	5,280	0.02%
10	Potato	25,924	1.1%	408,313	1.7%
11	Soy	20,922	0.9%	27,238	0.1%
12	Dried Beans	19,094	0.8%	11,873	0.0%
13	Mango	18,528	0.8%	80,422	0.3%
14	Orange	16,120	0.7%	146,159	0.6%
15	Soft Corn	15,505	0.7%	53,741	0.2%
16	Yucca	15,410	0.7%	64,273	0.3%
17	Passion fruit	13,264	0.6%	48,379	0.2%
18	Barley	11,634	0.5%	14,107	0.1%
19	Broccoli	10,136	0.4%	183,175	0.7%
20	Tender Beans	7,591	0.3%	12,152	0.05%

21	Wheat	6,880	0.3%	14,647	0.1%
22	Soft Bean	5,995	0.3%	27,872	0.1%
23	Baby Pea	5,794	0.3%	20,142	0.1%
24	Hard Corn Corn	4,939	0.2%	16,059	0.1%
25	Tomato (kidney)	2,653	0.1%	38,438	0.2%
26	Tomato (tree)	1,944	0.1%	10,605	0.04%
27	Dried Broad Bean	1,943	0.1%	1,059	0.004%
28	Dry Pea	1,532	0.1%	881	0.004%
	Total	2,279,882		24,450,865	

Source: Agricultural Public Information System (SIPA)

The agricultural production in the country is destined both for local consumption and for export. The crops that are mainly produced for internal consumption are citrus, corn, sugarcane, beans, rice, potatoes, tomatoes, and maize. While crops grown for export purposes are bananas, flowers, cacao, and coffee.

The cultivation of roses is one of the most representative items in the economy of Ecuador, being the second largest exporter of roses worldwide, thanks to the use of climatic conditions that constitute a competitive advantage for the sector. The roses occupy around 5,581 hectares, distributed in 6 provinces of the Andean region (Pichincha, Cotopaxi, Carchi, Imbabura, Ca?ar and Tungurahua); together they exceed an annual production of 3.6 billion stems of roses, where approximately 63 thousand people participated in the production process; of whom, 90% are permanent paid workers.

In Ecuador pesticides are commonly used in the course of crop production to control pests, diseases and weeds that would cause enormous losses if left unchecked, but stringent quality requirements together with extensive monoculture and other factors are leading to increasing dependence of these substances. These pesticides are imported into the country mainly from the following countries: Russia, China, Colombia, the United States, Spain, the United Kingdom, and Mexico. During 2021 52,642 tons of pesticides were legally imported into the country, including fungicides, herbicides, insecticides among others. The following table shows the quantities of pesticides imported in recent years, as well as the Active Ingredients and the main related importing companies.

Table 2: Imports of agrochemicals in Ecuador

Product/Year	2016	2017	2018	2019	2020	2021	Companies[8][8]

Pesticides: Fungicides	15,694.85	15,582.83	16,341.48	19,989.46	17,824.66	18,099.69	Ecuaqu?mica C.A., BASF Ecuatoriana S.A., Bayer S.A, Agripac S.A., Adama Andina B.V, Interoc S.A, Afecor S.A., Inmonte S.A., Solagro S.A., Farmagro S.A.
Pesticides: Herbicides	14,385.69	17,148.67	17,364.18	20,437.81	23,934.87	24,321.61	Agripac S.A., Adama Andina B.V, Ecuaqu?mica C.A., Inmonte S.A., Dupocsa S.A., Farmagro S.A., Interoc S.A., Solagro S.A., Afecor S.A., Nederagro S.A.
Pesticides Insecticides	4,145.65	4,511.9	4,794.69	4,947.1	5,678.65	5,892.99	Ecuaqu?mica C.A, Interoc S.A., Agripac S.A., Farmagro S.A., Adama Andina B.V, Solagro S.A., Inmonte S.A., Trilex C.A., Bayer S.A., Dupocsa S.A.

Other pesticides	1,922.56	2,463.55	2,665.99	2,631.4	2,336.89	4,327.76	Interoc S.A., Farmagro S.A., Cretar S.A., Semidor, Bayer S.A., Agripac S.A., Ecuaqu?mica C.A, Agroreprain S.A., Summit Agro South America SPA, Incoagro Cia. Ltda.
TOTAL (ton)	36,148.75	39,706.96	41,166.33	48,005.76	49,775.07	52,642.06	

Source: PPG Team based on SENAE records.

If the quantities imported are analyzed in detail, it can be observed that Highly Hazardous Pesticides (Ia-Ib) are annually entering and being used in the country. Specially, the entrance of Paraquat and Chlorpyrifos can be highlighted, being substances that are currently proposed to be listed as POP pesticides within the framework of the Stockholm Convention. The following table shows the detail of the imported amounts of these substances:

Table 3: HHPs, Chlorpyrifos and Paraquat imports in Ecuador.

Active Ingredient	2016	2017	2018	2019	2020	2021
HHP (Ia-Ib)	2,164.96	2,227.49	2,176.12	2,071.52	2,576.21	4,363.69
Chlorpyrifos	674.38	787.36	880.52	549.35	872.00	910.36
Paraquat	2,614.36	2,883.89	4,045.66	3,630.66	5,895.67	8,395.65
Total (ton)	5,453.71	5,898.74	7,102.3	6,251.53	9,343.89	13,669.69

Source: PPG Team.

The Directorate of Registration of Agricultural Inputs of (AGROCALIDAD) informs that until February 2022 there are registered 2,832 pesticide active ingredients in Ecuador, of which 35 belong to highly and extremely hazardous (Category Ia and Ib). Likewise, 1,068 are moderately hazardous (category II), 1,496 are slightly hazardous (category III) and 233 usually not hazardous (category IV). Given the limited capacity of government department responsible for registering pesticides, the registration of new chemicals is often delayed resulting in older more hazardous chemicals being the only chemicals available.

Based on the information made official by AGROCALIDAD, by May 2022 the number of registered agricultural supply companies amounts to 302 (in current status). Likewise, the authorized and registered agricultural supply stores are the link that producers have to acquire all kinds of supplies, and in April 2022 the number of registered agricultural input stores amounts to 6,101 throughout the territory.

When analyzing chemical inputs usage in crops, the Survey of Surface and Continuous Agricultural Production (ESPAC) shows as a result that by 2020 some type of chemical input has been used in 56,8% of the area of permanent crops and in 78.24% of the area of transient crops. In the same way, the application of extremely/highly hazardous pesticides according to the World Health Organization (WHO) classification were evidenced both in permanent and transient crops. Similarly, it is interesting to note that there is a percentage of the consulted farmers who do not know the degree of toxicity of the product they apply. Further detail can be observed in the following table:

Table 4: Area and toxicity of chemical inputs used in crops

	Permanent Crops				Transient Crops			
% Crop area where chemical inputs have been used.[9][9]	56.8				79.0			
	Herbicide	Insecticide	Fungicide	Other pesticides	Herbicide	Insecticide	Fungicide	Other pesticides
Extremely/Highly Hazardous (1a-1b)	4.49	3.29	2.24	26.45	6.20	6.29	3.42	9.19
Moderately Hazardous	26.12	33.72	21.28	20.25	21.92	33.54	22.87	22.49
Slightly Hazardous	20.16	22.53	32.90	21.49	21.02	21.86	27.17	27.44
Usually not Hazardous	39.91	31.27	32.81	26.45	36.41	26.22	33.16	25.13
Do not know	9.32	9.20	10.77	5.37	14.45	12.10	13.38	15.75

Source: Survey of Surface and Continuous Agricultural Production (ESPAC) 2016

Additionally, when farmers were consulted in terms of the attributes they consider when buying pesticides, near 48% indicated that they do so because of their effectiveness in pest control. In second place, with 24% due to technical suggestion (this answer was directly proportional to the educational level of the farmer) and the subsequent answers correspond to price (15%), less hazardous (11%), and third-party suggestion (2%).

Pesticides were also found exceeding the maximum residue limit in different regions and crops in the country. Based on AGROCALIDAD official information, 2,294 samples were taken between 2013 and 2016. The results evidenced 159 samples exceeding the maximum limit. The pesticides found were in total 39, of which 12 are not registered in the country. Among them were found POPs pesticides (Chlordane, Endosulfan), Chlorpyrifos (proposed to be listed as POP pesticide) and other Extremely/Highly Hazardous (1a-1b) pesticides (Carbofuran, Demeton, Metamidophos, Methomyl, Oxamyl, Phosmet). Further detail can be observed in the following table:

Table 5: Pesticide residue in crops

Detected pesticide	Categor?a Toxicol?gica	Tipo	Crop	Province
Acephate	Slightly Hazardous	Insecticide	tomato (tree), tomato (kidney), apple, pear	Imbaura, Cotopaxi, Guayas
Acetamiprid	Slightly Hazardous	Insecticide	tomato (kidney)	Manabi
Atrazina	Slightly Hazardous	Herbicide	cocoa	Manabi
Caebendazim	Slightly Hazardous	Fungicide	strawberry	Tungurahua
Carbaril	Moderately Hazardous	Insecticide	potato, tomato (kidney), orange	Tungurahua, Manabi, Sucumbios
Carbendazim	Slightly Hazardous	Fungicide	blackberry, tomato (tree), strawberry, pepper, orange, strawberry, onion, tomato (kidney), cucumber, melon, cocoa.	Carchi, Imbabura, Pchincha, Cotopaxi, Tungurahua, Chimborazo, Loja, Manabi, Santa Elena, Orellana, Napo
Carbofuran	Highly Hazardous 1b	Insecticide	tomato (tree)	Carchi
Ciprodinil	Slightly Hazardous	Fungicide	apple, peach	El Oro
Cis Clordano	Moderately Hazardous	Insecticide	corn	Santa Elena
Clorotalonilo	Slightly Hazardous	Fungicide	tomato (tree), orange	Carchi, Imbabura, Napo

Clorpirifos	Moderately Hazardous	Insecticide	passion fruit, onion, apple, orange	Carchi, Azuay, El Oro, Napo
Cymoxanil	Slightly Hazardous	Fungicide	blackberry, Banana	Carchi, Tungurahua, El Oro
Demeton	Slightly Hazardous	Insecticide	tomato (kidney), haba, onion, naranja, aguacate, onion, lemon	Carchi, pichincha, cotopaxi, manabi, santo domingo
Demeton S	Highly Hazardous 1b	Insecticide	blackberry, tomato (kidney), potato, blackberry, tomato (tree), pineapple, grape, apple, orange	Carchi, Imbabura, Cotopaxi, Tungurahua, Bolivar, Santo Domingo, Guayas, El Oro, Sucumbios
Difenoconazole	Slightly Hazardous	Fungicide	passion fruit, strawberry	Imbabura, pichincha
Dimethenamid	Slightly Hazardous	Herbicide	potato, tomato (tree), onion	Tungurahua, Chimborazo, El Oro
Dimetoato	Moderately Hazardous	Insecticide	tomato (tree), strawberry, tomato (kidney), potato, pepper, grape, apple, onion, peach, grape	Imbabura, pichincha chimborazo, loja, manabi, guayas, el oro
Diur?n	Slightly Hazardous	Herbicide	corn	Guayas
Endosulf?n	Highly Hazardous 1b	Insecticide	rice, corn, onion	Guayas, Santa Elena, El oro
Fenamidone	Slightly Hazardous	Insecticide	pepper	Manabi
Imazalil	Moderately Hazardous	Fungicide	onion, rice	Tungurahua, ca?ar, guayas
Imidacloprid	Moderately Hazardous	Insecticide	tomato (kidney), pepper	Pichincha, Manabi
Malati?n	Slightly Hazardous	Insecticide	cocoa	Los Rios

Metamidofos	Highly Hazardous 1b	Insecticide	orange, tomato (tree), tomato (kidney), blackberry, pepper, sand?a	Carchi, Imbabura, pichincha, Cotopaxi, Tungurahua, Loja, Manabi, Santa Elena, Napo, Pastaza, Zamora Chinchipe
Methiadathion	Slightly Hazardous	Insecticide	blackberry, Naranja	Carchi, Tungurahua
Methiocarb	Moderately Hazardous	Insecticide	rice	Los Rios
Methomyl	Highly Hazardous 1b	Insecticide	pepper, orange, tomato (tree), potato, onion, pear	Carchi, Imbabura, Cotopaxi, Azuay, Guayas, Napo
Metoxifenozide	Moderately Hazardous	Insecticide	broccoli, potato	Pichincha, Cotopaxi
Ometoato	Moderately Hazardous	Insecticide	tomato (tree), strawberry, potato	Imbabura, pichincha, chimborazo
Oxamyl	Extremely Hazardous 1a	Insecticide	orange, potato, pepper, banana, tomato (kidney), cocoa	Carchi, Imbabura, Pichincha, Cotopaxi, Chimborazo, Loja, Manabi, Los Rios, Napo, Pastaza
Penconazole	Slightly Hazardous	Fungicide	blackberry	Tungurahua
Phosmet	Highly Hazardous 1b	Insecticide	potato, apple	Pichincha, Guayas
Piraclostrobin	Moderately Hazardous	Fungicide	orange, papaya	Bolivar, Santo Domingo
Piriproxifen	Moderately Hazardous	Insecticide	grape	El Oro

Procimidone	Slightly Hazardous	Fungicide	blackberry, tomato (kidney), grape	Carchi, Pichincha, El Oro
Propamocarb	Slightly Hazardous	Fungicide	tomato (tree), strawberry	Imbabura, Cotopaxi
Tebuconazole	Slightly Hazardous	Fungicide	strawberry	Imbabura, pichincha
Thiametoxam	Slightly Hazardous	Insecticide	orange, papaya	Carchi, Pichincha, Guayas
Tiabendazol	Slightly Hazardous	Fungicide	cocoa	Sucumbios

Source: AGROCALIDAD.

The national emergency system ECU 911 reports a growing number of poisonings with agrochemicals among population. On the other hand, the information registered over the years in the Epidemiological Gazettes of the SIVE-Alert Epidemiological Surveillance System is not consistent, showing the following cases of pesticides poisoning:

Table 6: Agrochemicals poisoning records

	2015	2016	2017	2018	2019	2020	2021
Total	782	620	119	425	409	216	284
Organophosphates and carbamates	350	228	48	193	141	58	53
Herbicides and fungicides	261	214	34	128	138	102	162
Insecticides (pyrethroids)	116	99	23	43	83	31	34
Halogenated	35	40	10	26	23	17	14
Rodenticides	20	39	4	19	25	8	21

Source: Epidemiological Surveillance System

In terms of pesticides stockpiles within the territory, the UNDP/GEF Project ?National Programme for Sound Management of Chemical Substances in their Life Cycle (PNGQ)? has updated the national inventory of obsolete pesticides, resulting in a total of 77.88 tonnes in private warehouses, public institutions, and private companies. Of the total, 3.3 tonnes correspond to HHP. It is relevant to highlight that the Ministry of Public Health has also informed the existence of 1.7 tons of DDT, but due to poor storage conditions, this quantity amounts to 58 tons of DDT-contaminated waste stored in a warehouse of the former Secretary for Malaria Eradication (SNEM) in Guayaquil.

Table 7: Inventory of obsolete pesticides

	# of establishments inventoried	# with obsolete pesticides in stock	Tonnes of obsolete pesticides.[10] [10]	Categor?a Toxicol?gica
Warehouses	1,772	177	2.04	5% Extremely/Highly Hazardous (1a-1b)
				32% Moderately Hazardous
				44% Slightly Hazardous
				19% Usually not Hazardous
Public Institutions	34	29	20.96	11.4% Extremely/Highly Hazardous (1a-1b)
				38% Moderately Hazardous
				48% Slightly Hazardous
				2.6% Usually not Hazardous
Private Companies	48	30	54.88	1.5% Extremely/Highly Hazardous (1a-1b)
				15% Moderately Hazardous
				30% Slightly Hazardous
				53.5% Usually not Hazardous
TOTAL	1,804	236	77.88	

Source: PPG Team

Best Agriculture Practices and Organic Production

Currently the country has initiatives that promotes and support the implementation of sustainable agricultural practices: Good Agricultural Practices (GAP) certification and Organic Production.

The GAP are a set of principles, standards, and technical recommendations applicable to the production of food at the primary stage aimed at caring for human health, protecting the environment and improving the conditions of workers and their families. Thus, stimulating sustainable production, food security and the economic balance of producers and their families. Consequently, AGROCALIDAD in compliance with the commitment of ensuring quality food in its primary phase, has generated 28 guides and 6 manuals of Good Agricultural Practices, which detail the technical guidelines that producers must comply with within their farms to achieve and maintain the quality and safety of their products and access to the certification. By January 2022, out of the 843,000 UPA only 720 were certified in

Good Agricultural Practices (GAP) for crops, representing less than 0,1% of the total. Additionally, near 65% of the certified UPAs belongs to export crops and specifically 394 (54.7%) are certified for banana crop.

In terms of organic production, Ecuador currently has a legal framework for its regulation. By 2019, a total of 40,232.35[11][11] hectares were cultivated under organic production, which implies an estimated annual production of approximately 1.04 million tons. Additionally, 7,486.30 hectares were in the process of transition to organic production, which implies an estimated annual production of approximately 184.18 thousand tons. In total annual production represents only near 5% of the total crop production and only 2% of the total hectares destined for crop production. Considering the cultivated area, the provinces with the highest percentages of organic production are: Guayas (26.84%), El Oro (21.46%), Esmeraldas (11.67%), Los R?os (9.64%) and Manab? (7.59%). The main crops of organic production are: banana (corresponds to 76.86% of the total estimated annual organic production of crops), cocoa (0.89%), quinoa (0.34%) and coffee (0.17%).

Within organic crop production, the Proamazonia Project has made a significant contribution mainly on the coffee and cocoa crops, allowing the entry of these Ecuadorian products to international markets with differentiation in terms of quality and sustainable production.

Agricultural Plastics ? Baseline Scenario

Since 2013, Ecuador regulates the management of plastics in agricultural activity through ministerial agreement 021 ?Comprehensive management of plastic waste for agricultural use? where the extended responsibility of the producer (ERP) is established. The agreement includes as plastic waste for agricultural use the greenhouse plastics, triple-washed empty agrochemical containers, biflex covers, bow ties and protectors.

The agreement provides instructions to establish the requirements, procedures and environmental specifications for the preparation, application, and control of the Comprehensive Management Plan for Plastic Waste for Agricultural Use; to be presented by the importer or manufacturer, holder of registration or representative and in this way promote the reduction, recycling, and other forms of recovery of plastic products for agricultural application in order to protect the environment. The agreement also sets gradual targets with annual increase of 5% (based on an initial target of 20%) for collecting plastics reaching the 100% target by 2031. Except for Galapagos Islands that have a collection goal of 100%.

Based on previous and with the detail provided by Waste Management and Circular Economy (GRECI) from the MAATE the following volumes of plastic waste are generated (data corresponds mainly to empty containers), collected and managed through private associations.

Table 8: agricultural plastic waste management

	2017	2018	2019	2020	2021

Total Agricultural Plastic Waste Generation (MT) [12][12]	1,189.6	1,233.38	1,438.25	1,311.66	1,359.15
Agricultural Plastic Collected (MT)	356.88	431.6	585.75	704.76	727.31
% of Agricultural Plastic Collected	30%	35%	40.7%	53.7%	53.5%
Target as per MA	30%	35%	40%	45%	50%

Source: PPG team.

Although legal framework set the basis for the comprehensive management of plastic waste for agricultural use, the country faces many challenges for its implementation. In a first place, enforcement is being limited due to Information regarding plastic waste management is only available for pesticides containers. Up to date, no other plastic has been informed in collection volumes, and related treatment and disposal practices. In terms of pesticide containers targets set by ministerial agreement are being a accomplished as per official information being the incineration the only treatment evidenced. Although some recycling initiatives are being developed, these ones have not received yet the official habilitation from the Ministry of Environment. These challenges can be improved through the project activities.

Similarly, farmers practices when managing empty containers show room for improvement. It was found that only 76% of the consulted farmers perform the triple washing of the container. Regarding the destination of the washing liquid, it was revealed that 83% pour it into the fumigation pump, while 8% and 9% pour it on the ground and on a body of water respectively. Furthermore, the following table shows the main actions towards the final disposal of empty containers:

Table 9: Destination of empty containers

Final destination of empty containers.	Manage empty containers	15.69%	Reuse	20.70%
			Collection Center	31.60%
			Deliver to Commerce	47.70%
	Discard empty containers	29.13%	In the field	35.80%
			In separate waste	20.74%
			In regular waste	43.46%
	Burn empty containers	46.90%	Open burning	98.06%
			High temperature incinerator	1.94%
	Burry empty	8.28%	Different places	56.88%

	containers		Specific identified place	43.12%

Source: Survey of Surface and Continuous Agricultural Production (ESPAC) 2016

This information evidence that burning empty containers is the most widely applied practice for their elimination. Building on existing efforts of the ?Aliados del Ambiente? campaign within the scope of the PNGQ project, this project should further raise awareness and strengthen capacities for environmental sound management of plastics, especially among farmers.

Financing of agricultural sector

According to the Global Financial Inclusion 2017, 48.8% of adults do not have any type of accounts in the country's financial system and this condition is even worse for women (57.4%) than for men (60.2%). At the national level, 31.9% of adult Ecuadorians have had the opportunity to access a loan in the last year and in the case of women, this figure is only 24.9% versus 39.0% of men. A similar situation occurs in the poorest population (25.6%) and in the inhabitants of rural areas (29.0%). Only 11.8% of the loans came from a financial institution and in the rural area it was 11.0%. Furthermore, women in rural areas have had less access to credit from the financial system (8.2%) than men (15.6%).

The national financial system (SFN) is made up of the public, private, and popular and solidarity sectors, which intermediate resources from the public. The SFN formed by private and public banks is the main financier of this sector with a participation of 82.9%; while the Superintendence of Popular and Solidarity Economy (SFPS), formed by savings and credit cooperatives and mutuals, financed 17.1%. Delving deeper into the agriculture, forestry, livestock, and fishing sector, it is observed that in the period 2016-2021, the volume of credit granted by the entities of the national financial system (SFN) and the popular and solidarity financial system (SFPS) was USD 2,892.4 million, equivalent to 2.8% of GDP and with a participation of 8.4% in relation to the total volume of credit at the national level, on average for the period.

In relation to the type of loans that were granted, 51.8% were commercial loans, 37.5% were microcredits, 9.8% were productive loans, among others. At the territorial level, 86.3% of the credit volume was concentrated in the provinces of Guayas, Pichincha, Manab?, El Oro, Los R?os, Tungurahua, Cotopaxi, Chimborazo, Loja and Azuay; while in the rest of the provinces the value is marginal.

Within the agriculture, forestry, livestock and fishing sector, the subsectors that concentrate the largest volume of credit in the SFN were: marine aquaculture, fishing, fruit growing, cattle breeding and poultry farming, that together participate in the volume of credit with 62.6%, on average. The main type of credit for the agriculture, forestry, livestock and fishing sector that has been granted by the entities of the National Financial System has been granted by private banks (77.1%), followed by public financial institutions (22.2%). It should be noted that until 2019, public financial institutions had been growing in their share of credit volume until 2019, reaching 27.3%, but then falling to less than half with 12.1% in 2021. Regarding the participation of public banking, it is mainly concentrated in BanEcuador B.P. with 71.4% followed by National Finance Corporation B.P. with 26.3%

COVID-19 pandemic and Russia-Ukraine Conflict impact in agricultural sector.

The COVID-19 pandemic has left profound effects on the economies of countries worldwide. These effects have been complemented by others, resulting in increases in food insecurity, although differentiated depending on the structural and conjunctural conditions of each country and each territory. Particularly in Ecuador[13][13], the immediate effects of the pandemic such as infections, deaths, increases in domestic violence, drop in income and employment, as well as food insecurity, would have been relatively mild in rural areas during first year of pandemic. However, it was during 2021 that the complex conditions of the agricultural context that they had been facing since before the pandemic worsened, having to manage production with more expensive supplies and marketing with the same or lower prices. Thus, family farming showed rather its vulnerability, because when its thin profit margins are affected, household welfare decreases rapidly.

In addition, the sector is impacted by the conflict in Russia and Ukraine because Ecuador allocates to Russia, Ukraine, and Eurasian countries (Armenia, Belarus, Kazakhstan, and Kyrgyzstan) about 1,200 million dollars a year in non-oil exports (mainly bananas and flowers). However, the impact may be greater, since some exports had certain European countries as a distribution platform, from which they were consolidated and sent to Russia. Producers are also suffering from the conflict, since the prices of fertilizers, urea and other inputs that Russia and Ukraine exported to the world have risen, and that have an impact on the cost of production of agricultural goods.

In this hostile context, however, there is an opportunity to exploit the alternative of cleaner production; that is, to initiate a non/low-chemical production transition, which has the advantage of reducing the cost of inputs, recovering the soil and consequently, eventually increasing yields. These systems include not only the application of integrated pest management and biological/agroecological inputs, but also the implementation of practices such as crop rotation, diversification of farm production and agroecological production practices. If support were achieved in the opening of markets that know how to reward these efforts, prices would also improve for these producers, leading all these advantages to a clear increase in their net income. However, for an effective change in this sense, it is necessary that the process be carried out jointly between groups of farmers so as not to affect the individual efforts to decontaminate soil and water. Coordination between the different actors in the value chain is also essential, as well as government support, both at the central and local levels, providing the appropriate incentives and facilitating collective action in an effective and lasting manner.

c) The proposed alternative scenario with a brief description of expected outcomes and components of the project.

The main challenges to be addressed by this project are the following:

a) Enable conditions for the sound management of chemicals and waste through policy and enforcement. Although main regulations for the sound management of agrochemicals and related agriplastic waste are in place in Ecuador, relevant ministries involved lack the necessary capacity, staff, and resources to enforce the pesticide legislation and ensure complete compliance with the multilateral

environmental agreements. Likewise, a major coordination among competent authorities should be encouraged to effectively evidence a transition to a low/non-chemical sustainable agriculture and enhanced agricultural plastics end of life management.

Less hazardous options to high environmental impact pesticides are not widely available in the country or even the region. This is mainly because processes for registration and procurement are commonly designed to register and purchase chemical pesticides including HHP and are often not relevant for biocontrol and non-chemical alternatives which makes it difficult to register and its effectiveness has not been tested at the local level. Furthermore, there are certain tax incentives that encourage the imports of chemical agricultural inputs.

Considering that non-chemical solutions are highly pest- and agroecosystem specific, strengthening of national capacity and scientific knowledge are highly required. Moreover, there is no proper post-authorization surveillance, therefore the country has not accurately evaluated the multidimensional impact of the high use of these pesticides (health, environment, biodiversity, etc.) and consequently competent authorities are not able to effectively develop necessary interventions for agrochemicals responsible for most harm.

Finally, it is important to highlight the challenge of reaching major alignment between standards for export and domestic consumption crops, minimizing chemical residues in food mainly sold in local markets and improving impacts on health and nutrition of local consumers. Framing pest control within an Integrated Pest Management (IPM) approach is the best way to achieve sustainable production. It is a proven technology and an efficient means of responding to consumer demands of good quality products whilst at the same time addressing environmental, food safety and security, health and socio-economic issues.

b) Establish sustainable resources for the transition to low/no-chemical agriculture through finance and investment. As described in previous section, although financing is available for the agricultural sector from both public and private sources, neither currently support models that promote sound management of agrochemical and agri-plastics throughout their lifecycle. Moreover, perverse application of cost recovery or economic instruments such as pesticide subsidies should be discouraged.

There is a need to support the development of agricultural tailored sustainable financing options where criteria and targets for use of no/low-chemical alternatives are included into eligibility for investment and loans. For this purpose, it is also essential to work on the knowledge gap both in financial institutions, extension units and farmers themselves to build the essential capacity for the design, dissemination, access, and application of sustainable financing sources in agricultural activity.

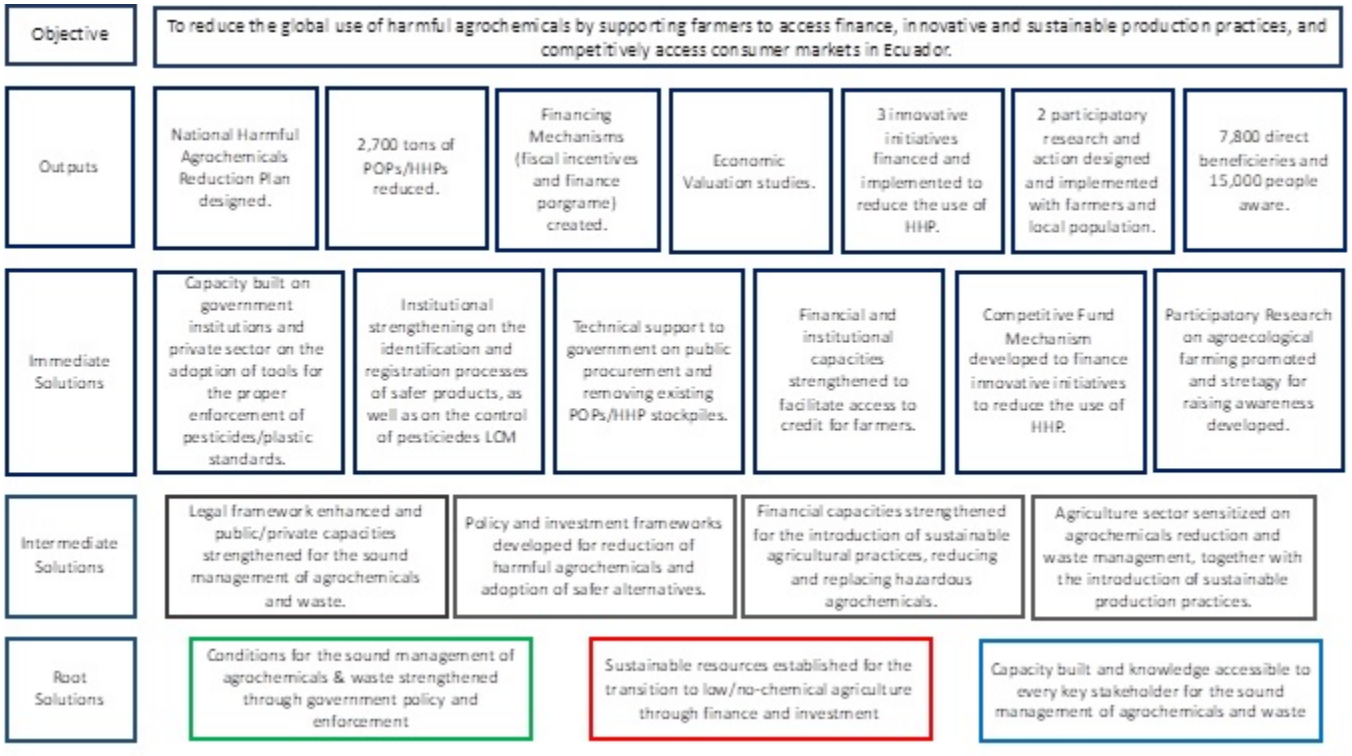
Although the country counts on initiatives such as Good Agricultural Practices and Organic Production Certifications that increased compliance to higher production standards on pesticide and plastic inputs, it was evidenced that a very low rate of producers has been certified (0,1% in GAP and 5% in Organic) and in most cases, it involves high value commodities (such as cocoa, banana, coffee) for export markets as main destination. The lack of connection to markets, that are willing to pay an added value,

for many small holder farmers fails to justify the costs associated with the adoption of alternative pest control and pollution management measures.

c) Build capacity and make knowledge accessible through the sound management of chemicals and waste. This is one of the main pillars on which the project should work to achieve a structural change. Frequently, farmers decision-making on pest management is driven by profitability and risk-aversion, therefore the perceived efficacy is important. It is difficult for farmers to change these risk-averse and engrained practices without compelling incentives. General awareness about available alternatives and sustainable agricultural practices remains low among farmers, regulators, and investors. Consequently, it is essential to build the necessary capacity and disseminate knowledge on effective alternatives to HHP, POPs and agri-plastic at all levels, particularly farmers and regulators.

Finally, to address the use of harmful agricultural chemicals, the project?s strategy will require the involvememnt of key stakeholders, such as regulatory authorities (including customs officers to ensure illegal trade of obsolete or banned chemicals is averted), agricultural extension services and public health advisory services and poison control centres, farmers? organizations and networks, trade unions and agricultural producers organizations, and the private sector (including pesticide manufacturers, importers, distributors and users), civil society, academics, scientists and researchers).

The following figure shows the alternative pathway and solutions to address the three categories of immediate, intermediate, and root causes described in problem tree.



Expected Outcomes and components of the Project

PROJECT COMPONENT 1: GOVERNMENT POLICY AND ENFORCEMENT.

OUTCOME 1: POLICY AND INVESTMENT FRAMEWORKS INCENTIVIZE REDUCTION IN USE OF HARMFUL AGROCHEMICALS; AND REGULATORY FRAMEWORKS ENHANCE SOUND AGRICULTURAL CHEMICALS MANAGEMENT.

Output 1.1: Training and outreach with customs authorities to avert illegal imports and trade of hazardous chemicals conducted.

Through this activity the project will strengthen national capacity to avert illegal imports and trade of hazardous chemicals among main competent authorities and key stakeholders by implementing a capacity building programme and an outreach communication strategy. As a result, a total of 50 officers will be trained and 2,800 people aware.

The following activities will be developed to reach Output 1.1:

a) Institutional Coordination: Promote collaboration between the MAATE, MAG, AGROCALIDAD, ABG and National Customs Service (SENAE) authorities to boost compliance on legal import and trade of pesticides within the country. This activity will guarantee the identification of relevant stakeholders at national and local level, with focus on customs and enforcement authorities (such as inspectors), to be involved in the training process to avert illegal imports and trade of hazardous chemicals. Further assumptions concerning arrangements for training will be agreed upon.

b) Training Programme: design and implement a training programme at national and local level, with emphasis on border areas. The main objective of this training programme is to provide the skills necessary to monitor and control the imports and exports of hazardous chemicals, with focus on pesticides (POPs/HHP) including the detection and prevention of illegal trade. The training programme will include contents of international commitments, forbidden pesticides in the country, safe storage and sound management of pesticides, GHS, International Chemical Safety Card, health, and environmental associated risks.

For the programme design, the project will carry out a survey of international experiences in training customs agents to share them with national officials. The programme will be structured in a three-phase approach: i) Train-the-Customs ? trainers: key personnel of Customs will be selected to be trained as trainers, to promote a learning process by taking into account the challenges faced at their workplaces; ii) Training Customs, Enforcement Officers and previously identified stakeholders; iii) Phase III: Monitoring and evaluation. Specific and measurable performance indicators of the training programme will be defined to monitor its effectiveness in regular basis and take corrective measures if needed.

To minimize the impact of staff turnover and sustain the training the project will develop a Training Manual for Customs and Enforcement Officers to ensure knowledge is available for new officers. The structure of the Manual will be properly defined during project implementation and effective e-learning tools will be also explored. The project will promote the integration of the training programme within authorities training curricula. This system will also contribute to increase national capacity building by including other hazardous chemicals of national and global importance.

Through this activity a group of 50 officers (25 women, 25 men) will be trained at national, provincial, and municipal level.

c) Outreach communication strategy: this activity will design and implement a communication strategy, allowing the dissemination of the problems related to illegal trade of hazardous chemicals and raise awareness of the compliance importance of the regulatory framework. The strategy should include as target audiences: importers, traders, distributors, farmers, and the public. Through the communication strategy the project will raise awareness of 2,800 people (1,400 women, 1,400 men) involved in agrochemicals value chain.

Output 1.2: Capacity of government institutions and the private sector to properly uptake, utilize, and adapt tools such as the FAO Pesticide Registration Toolkit, the International Code of Conduct on the distribution and use of pesticides, among others, that allow the proper enforcement of pesticides/plastic standards.

Through this activity the Project will strengthen national government institutions and private sector in addressing main elements for the environmental sound management of pesticides throughout the life cycle. This activity will be mainly coordinated with MAATE, MAG, ARCSA, AGROCALIDAD, ABG, SENAE, CONGOPE as government institutions. As for the private sector, APCSA, INNOVARO and APROQUE will be involved as representative associations of agrochemical companies.

The following activities will be developed to reach Output 1.2:

a) Capacity Building Programme: The project will design and implement a capacity building programme for enhancing the enforcement of pesticides and plastics standards within the territory. The programme will aim at strengthening key institutions in the agrochemicals value chain and government institutions at national and local level. The Programme will include:

i) Pesticide Registration Process Strengthened: This activity will be coordinated with the National Technical Committee on Pesticides which is formed by AGROCALIDAD, MAATE and ARCSA. Each of these institutions are involved in the review of files prior to the registration of pesticides for agricultural use (PQUA) in the agronomic, eco-toxicological and toxicological fields respectively.

Based on the national gaps and needs, a specific training programme on FAO Pesticide Registration Toolkit will be designed and implemented targeting involved personnel. The training will consist of building capacity in general processes and procedures for pesticide registration, and focus on more specialized technical or scientific aspects, such as risk assessment, efficacy evaluation, risk reduction and management, classification, and labelling, etc. As a result, the staff will be able to use the toolkit to support a number of their usual tasks, including: finding data requirements, evaluating the technical aspects of the registration dossier, choosing an appropriate pesticide registration strategy and procedures, review of risk mitigation measures and obtain advice on decision making. Additionally, will be linked to many pesticide-specific information sources, such as registrations from other countries, scientific reviews, hazard classification, labels, MRLs, and pesticide properties.

A least 30 staff (15 women, 15 men) of government institutions will be trained in the FAO Pesticide Registration Toolkit adapted to Ecuador current needs. A Training Manual will be developed to ensure knowledge is available for new officers. In addition, a Massive Online Open Course (MOOC) training

will be developed and will be available on the MAATE platform. The project will promote the integration of the training programme within authorities training curricula.

ii) International Code of Conduct on the distribution and use of pesticides promoted: In line with the provisions of the international code of conduct, the project will carry out an analysis of the existing gap on the provisions that emerge from the code and the national key stakeholders, with identified staff at appropriate levels, involved in its application. Based on the analysis, the project will design and implement an action plan that promotes the application of the ethical principles and guidelines set forth in the code so that government authorities, the pesticide industry, international institutions, pesticide user organizations, industries of agricultural products and groups in the food industry (eg supermarkets) that are in a position to influence good agricultural practices, are aware of their responsibility in working together to ensure that the objectives of the Code are achieved.

? The project will promote the establishment of inter-agency commission for improving cooperation and coordination among key stakeholders in the action plan design, implementation, and compliance as well as the establishment of different working groups aligned to the International Code of Conduct provisions.

? The project will raise awareness of at least 500 people (250 women, 250 men) from different key stakeholders? groups (including the industry) on the International Code of Conduct provisions and involve them in their application.

Output 1.3: Institutional strengthening for the rapid identification of alternatives to agrochemicals with high environmental impact (i.e., HHP), agile registration processes of better products and strengthening of the procurement processes to facilitate the use of the alternatives found.

This Output aims at establishing a national plan for gradually reduce the use of harmful agrochemicals that are currently in use in the country. The plan will provide an orderly transition in order to guarantee the availability of alternatives and appropriate adoption for crop production, enabling farmers to maintain the efficiency of their productivity during the process of abandoning the use of these substances.

As identified in Risk 2 ?Loss of income to small and medium sized farms due to banning of import or restricting the use of certain hazardous pesticides?, a Strategic Environmental and and Social Asssessment (SESA) will be adopted druing preparation of the national plan for gradually reducing the use of harmful agrochemicals to address the potential for loss of income for various groups.

The following activities will be developed to reach Output 1.3:

a) Alternatives identification: The project will support the reduction of hazardous agrochemicals with high environmental impacts by introducing safer alternatives options (such as biological control agents). Availability and cost of alternatives is essential before an agrochemical product can be phased out or substituted. For this purpose, this activity will at first list pesticides with high environmental impact through the review of registered agrochemical products and import quantities against the WHO recommended classification of pesticides by hazards. This list will consider specially Glyphosate (for its national concern in Gal?pagos), Paraquat, Chlorpyrifos and Methoxychlor to be listed in the Stockholm Convention and agrochemicals within the framework of the European Green Deal.

In close coordination with the National Technical Committee on Pesticides and the INIAP, the project will develop a Harmful Agrochemicals Reduction Plan to gradually replace identified HHP of national relevance. The plan will include justification for their ban, restriction and/or replacement, and the assessment of available alternatives both in the region and other regions. Where alternatives to identified HHPs are not available in the region, or have not been tested in similar local conditions, the project will support limited field testing and demonstration of these alternatives[14][14]. In coordination with INIAP, local Universities and the Directorate of Productive Development of CONGOPE the development of a national plan for the production and use of biological control agents will be supported with emphasis on those with potential to replace HHPs, so that their reduction and ultimately their prohibition is possible.

The review and updated of existing registration and procurement procedures will be also encompassed in order to promote more agile processes and facilitate the use of alternatives found. The drafting/updating of the necessary documents (manuals, procedures, etc.) linked to the registration and procurement processes will be developed by the project. The project will ensure the training of the personnel involved in their application.

b) Outreach communication: the project will design and implement a communication strategy to disseminate to key stakeholders the Reduction Plan and promote the adoption of found alternatives, as well as promoting the adoption of IMP as sustainable production practices evidencing the achievement of the same levels of productivity during the process of abandoning the use of harmful substances.

Output 1.4: Institutional strengthening for the identification, control and final disposal of pesticides and their wastes. Incorporation of early warning strategies for waste generation.

This output aims to enhance compliance for the identification, control and final disposal of pesticides and their wastes among enforcement authorities, local authorities, and private sector. For that purpose, AGROCALIDAD, MAG, MAATE, MSP, ABG, SENAE, local authorities and private sector will be mainly involved.

The following activities will be developed to reach Output 1.4:

a) National Waste Management System strengthened: this activity will give support to assess current national waste management system which controls every stage of waste management, from generation to disposal. This analysis will identify and define the roles and interactions of key actors involved (at national and local level) in the linked value chain of pesticides and wastes and promote joint actions between institutions, to provide a sustainable and enhanced solution to the comprehensive management of these type of products and its waste in the country.

The actions will include strengthening the identification and traceability systems among competent authorities, considering the improvement of exchange and dissemination of information to speed up decision-making on the management of agrochemicals and wastes, the development of emergency response mechanisms, as well as the introduction of early warning strategies for waste generation. For this purpose, the project will evaluate the feasibility and implement an Official Information Exchange platform. The evaluation will include where should the platform be hosted. Through the platform interaction of the competent bodies will be promoted and facilitated based on the required interactions

detected. In this sense, already existing official entities that make use of information and make decisions regarding POPs/HHP and plastics waste management will be connected through this platform.

This FSP will also support the development of strategies to strengthen: i) the surveillance of events related to hazardous pesticides exposure and intoxication, within the SIVE-Alert Epidemiological Surveillance System, which takes into account the differentiated impact on women and men; and ii) the monitoring of pesticide residues in food within the Direction of Food Safety of Agrocalidad.

b) Training Programme: the project will design and implement a training programme for strengthening national and local capacities for the identification, control and final disposal of pesticides and related wastes. The training will focus on existing procedures, standards, and technical guidelines as well as those that are updated or developed by the project. This training will build upon the obtained results by the PNGQ implementation and will identify room for improvement to be addressed as well as promote the sustainability of results.

The training will target the following 3 groups:

- Inspectorates: aims to strengthen the enforcement capacities of national and local government inspection teams to enable inspections of agrochemicals management as well as the treatment/disposal or elimination of their wastes (pesticides including POPs/HHP and plastics) and support the assessment and development of response and remediation plans following pesticides accidents. The training will focus on existing procedures, standards, and technical guidelines as well as those that are developed by the project. All trainings will include a gender module and participation of women in trainings will be highly encouraged.

- Private Sector (Industry/Importers/Distributors/Waste and Management Disposal Companies): The training programme/plan also aims to raise awareness and strengthen the capacity of the industrial sector to i) introduce best practices for the management of pesticides and related wastes and ii) ensure their compliance with the national legal framework, including the obligation to withdraw obsolete pesticides that are in the national market and to manage their final environmentally appropriate disposal, applying the principle of co-responsibility in environmental matters as well as the ?Comprehensive management of plastic waste for agricultural use? where the extended responsibility of the producer (ERP) is established.?

- National/local governments: The training programme/plan will also strengthen the capacity of national and local governments with competence in pesticides and waste management to meet requirements under national regulations and international chemicals- and waste- Conventions.

This activity will train 1,000 people (500 women, 500 men): 300 inspectors, 500 Private sector and 200 National/Local Governments.

Output 1.5: Updating or elaboration of regulations at all levels (national and local), in coherence with the regional control of trade in agrochemical substances and applied throughout the life cycle of products/substances. (Considering the recycling of plastics for agricultural use)

This output seeks to strengthen existing legal and regulatory framework for life cycle sound management (LCM) of agrochemicals substances, including the plastics for agricultural use, in Ecuador in coherence with international commitments and regional control of trade.

The following activities will be developed to reach Output 1.5:

a) Overall national and local policies and regulations assessment: the project will assess existing policies, regulations, standards and measures at national and local level related to the environmental sound management of agrochemicals and related waste (including plastics management) in coherence with the regional control of trade. A preliminary assessment has been conducted during PPG phase and the detail can be found in Annex 14 ?Institutional and Legal Framework Analysis?.

b) Legal Framework Roadmap: based on the assessment, the project will propose a roadmap and the national approach to draft/update the legal instruments for a sound management of agrochemicals through their life cycle and ensure a sound enforcement. This roadmap will be validated by the MAATE in coordination with the National Technical Committee on Pesticides. By implementing an agreed roadmap, the project will ensure that the legal drafting during the project is done in a coherent and integrated approach, defining clear roles and responsibilities for each institution. The identified legal instruments to be supported/drafted by the project are:

In addition, the project will support the consultation and drafting of national policy(ies) resulting from the economic valuation studies under Output 2.1.

As identified in Risk 2 ?Loss of income to small and medium sized farms due to banning of import or restricting the use of certain hazardous pesticides?, the legal framework roadmap and all legal instruments to be supported/drafted will be considered in the Strategic Environmental and and Social Asssessment (SESA) to address the potential for loss of income for various groups.

PROJECT COMPONENT 2: FINANCE AND INVESTMENT.

OUTCOME 2: WIDESPREAD ADOPTION OF INNOVATIVE SAFER ALTERNATIVES AND SUSTAINABLE AGRICULTURAL PRACTICES REDUCE DEMAND FOR AGROCHEMICALS AND EFFECTIVELY REPLACE THEM. AND AGROCHEMICAL WASTE IDENTIFIED, AND SUSTAINABLY MANAGED THROUGH STRENGTHENED WASTE MANAGEMENT REDUCTION OR RECYCLING SYSTEMS.

Output 2.1: Economic valuation studies to evaluate the impact of the high per capita and per hectare consumption of agrochemicals in government spending conducted.

Through this output the project will conduct an assessment of the effects of different types of agriculture public spending at national level incurred due to the high consumption of agrochemicals. The main purpose is to make available research findings and the evidence needed to support enhancement on political actions to reduce these socio-economic costs and more effectively achieve national development planning goals by promoting sustainable agricultural practices.

The following activities will be developed to reach Output 2.1:

a) Economic valuation studies development: the project will assess public expense incurred by the government due to the high consumption of agrochemicals[15][15] in the agriculture sector (subsidies, grants, transfers, public purchases, and other payments). The economic evaluation includes an analysis

of the net effect of costs and benefits. Whenever the data required for the evaluation is not available in the country, calculations based on global averages should be considered as the best information available. The assessment will include and measure at least of the economic cost and benefits of the following dimensions: i) Valuation on Environmental Impact (environment degradation, natural resources contamination, etc); ii) Valuation on Public Health Effects (Effects on human health encompass acute poisoning, including suicide attempts, mass poisoning from contaminated food, chemical accidents in industry, and occupational exposure in agriculture); iii) Valuation on Biodiversity Loss Impact (crop pollination problems and honeybee losses; crop and crop product losses; bird, fish, and other wildlife losses.); iv) Valuation on economic impact (agricultural growth and productivity, international trade barriers, waste management, increased control expenses resulting from pesticide-related destruction of natural enemies and from the development of pesticide resistance in pests). The studies will be detailed in a final report which will also include recommendations on the policies and action plans to be adopted by the main competent public authorities in order to mitigate these impacts and promote sustainable agriculture within the country. These recommendations will be considered to be supported/drafted under Output 1.5.

b) Report Dissemination: based on the conducted assessment and the evidenced found, the project will raise awareness among competent authorities to strategically design a roadmap for the draft/adaptation of national policies to promote the reduction of agrochemicals use and the consequent minimization of their multiple impacts. This activity will involve and mainly target the MAG, AGROCALIDAD, MAATE, MSP.

Output 2.2: New fiscal incentives that favor reduction and/or substitution of hazardous pesticides explored.

Tax expenditures are concessions or exemptions from a ?normal? tax structure that reduce government revenue collection. Tax relief can take the form of a tax allowance, an exemption, a deduction, or a tax credit (IMF, 2014). Currently, 14 tax incentives associated with Sustainable and Deforestation-Free Production have been identified in Ecuador. Of which, seven would be favorable, four favorable as long as they are conditioned (if limits are established) and three unfavorable (Oliva, 2022). One of the negative tax incentives identified is that inputs imported or purchased in the domestic market for the agricultural, aquaculture and fishing sectors, including HHPs and other hazardous agricultural chemicals, do not pay VAT (Art. 55, LRTI).

Through this Output the Project will assess different alternatives of fiscal incentives to be applied in the country for promoting investment in the agricultural sector favoring the transition to a low/non-chemical production. In the same way, existing incentives will be analyzed and those ones unfavorable will be discouraged or eliminated. The assessment will conclude on at least 5 feasible incentives to be applied according to country context and the project will promote the implementation of at least 1 of them.

The following activities will be developed to reach Output 2.2:

a) Baseline Incentives Assessment: at the beginning of implementation, the project will identify existing fiscal incentives in the country that are related to the agricultural activity and will evaluate the environmental incidence of each of them.

b) New Fiscal Incentives Assessment: based on the national context analysis and the scope of the activity to be target, different options of fiscal incentives will be evaluated (for example: temporary tax exemption/tax exemption; tax rate reduction; investment tax credit; etc.). Cost and benefits of different options will be considered and properly analyzed. Furthermore, issues related to the implementation will be introduced: Initial fulfillment of conditions; reporting and ongoing compliance monitoring; review and termination provisions; minimize the possibility of corruption in its granting and increase transparency and improve governance.

As identified in Risk 2 ?Loss of income to small and medium sized farms due to banning of import or restricting the use of certain hazardous pesticides?, the New Fiscal Incentives Assessment will be considered in the Strategic Environmental and and Social Asssessment (SESA) to address the potential for loss of income for various groups.

c) Reform secondary regulations to limit or put safeguards on tax incentives that do not have environmental validations and that today would be unfavorable or that could encourage the use of agrochemicals. It includes reforming the presidential decree that regulates goods with a 0% VAT rate so that the beneficiaries of the incentive are complying with the standards of good environmental practices.

d) Fiscal Incentives Recommendation: previous analysis will deliver at least 5 alternatives of feasible incentives to be implemented in the country with the main target of reducing the use of harmful pesticides or promoting its substitution. The project will promote the partnership with key stakeholders in order to implement at least 1 of the recommended incentives.

e) Lessons Learned Capture: lessons learned on analysis and implementation will be documented and disseminated among key stakeholders.

Output 2.3: Strengthening financial capacities to facilitate access to credit for farmers who use good practices. Create financing programs and risk management of value chains, applying concepts of green recovery considering environmental quality criteria (pollution), adaptation and mitigation of climate change.

Through this Output the Project will establish partnership with finance entities and strengthen their capacity and understanding to develop financial products that would be tailored to the agricultural sector and better assess loans applications from farmers which implement good practices. In addition, work with legally established small organizations (such as cooperatives) and individual farmers, especially with women and young farmers, to build their financial capacity in developing bankable projects and loan/investment applications and subsequently apply for access to credit.

As a result, at least 10 financial cooperatives will be trained, and 2,000 farmers of priority crops trained in accessing Finance Program products.

The following activities will be developed to reach Output 2.3:

a) Financial Capacities Strengthened: This activity aims at engaging potential/innovative lending sources of green/environmental financing through education and collaboration to provide financial products suited to the agricultural sector, for instance, micro-finance institutions willing to operate or facilitate in the territories of intervention. This includes training of staff of the financial entities in the assessment of agricultural investments (including concepts of green recovery, considering

environmental quality criteria, adaptation and mitigation of climate change, risk assessment and management of value chains, evaluation of legal and technical requirements, etc.) as well as the appraisal of loan guarantees to evaluate the economic case for loans, leases or even, equity participation with proper attention given to gender equality financial inclusion.

Furthermore, training in Environmental and Social Risk Analysis (ESRA) system will be delivered, which aims at financial institutions easily and conveniently identifying and evaluating the environmental and social risks that their beneficiaries incur in carrying out their activities. The ESRA must be part of the general credit risk management of the Intermediary Financial Institutions (IFIs) to ensure its application. The procedures for ESRA implementation must cover the entire credit cycle, having as a minimum basis compliance with local regulations and international conventions/treaties signed by Ecuador. The ESRA regulation should give general guidelines for at least the following processes:

- Identification and categorization of risk
- Risk assessment
- Risk mitigation
- Risk monitoring and control
- Mechanisms for participation and complaints
- Disclosure policies

This activity will enhance the successful experience obtained in the BIOFIN initiative and PROAmazonia Program in Ecuador by working in close collaboration with National Corporation of Popular and Solidarity Finance (CONAFIPS) and BanEcuador.

b) Assisting with capacity building organized farmers in accessing funds.

Training farmers on business and operations management will provide farmers with the tools to not only access the finance but also to successfully execute their investment plans ?adapted to the local context- to create a sustainable and more profitable agriculture, with the aim of improving income for farmers through the attainment of better crop prices facilitated by transparent and responsible supply chains. It includes workshops/awareness raising events conducted to increase farmers awareness (including women and young farmers farmers) of due diligence, compliance with regulations and access to different types of finance sources.

This activity includes creating a guidebook for the farmers in a user-friendly manner to help them with their loan applications.

c) Finance Programme Created:

In coordination with financial entiy(ies) this activity will strengthen or establish a tailored financial product and with affordable financial conditions for farmers who implement good agricultural practices (such as Integrated Pest Management (IPM), agroecological practices, organic production, etc.) that enables the reduction of hazardous pesticides in priority crops. This tailored financial product will also consider promoting diversified agricultural production (as opposed to monoculture). It may involve several complementary elements such as:

i. An adequate regulatory environment for financial institutions to guide the management of environmental and social risks, as well

as to promote the offer of this type of financial products.

ii. Expand the supply of financial products and services for sustainable agricultural production (credit, insurance and National

Guarantee Fund of CFN).

iii. Promotion of financial education, especially in the productive sectors related to agricultural production chains.

iv. This activity will also technically assist at least 5 farmers from different crops (Maize; potato; broccoli; tomato; rice; banana;

barley, wheat, dragon fruit among others) who implement good agriculture practices in applying and obtaining soft credit available

through the programme created by the project. This activity will include the certification of these farmers in GAP. Crops selection

during project implementation will be agreed with AGROCALIDAD and MAG.

Output 2.4: Strengthening the capacity of the national extension units under AGROCALIDAD, Ministry of Agriculture and Rural Social Security, as the private associations to access financial mechanisms and incentives created by the project and on better sustainable agricultural practices to increase income and reduce the use of harmful agrochemicals in priority crops.

Through this Output the project will seek to strengthen the extension units under AGROCALIDAD, Ministry of Agriculture and Livestock (MAG) and the Rural Social Security (SSC), as well as private associations, in access to financing and sustainable agricultural practices so that they are capable of replicating and disseminating knowledge to farmers and consequently, increase the demand for this type of financial mechanism which promotes better sustainable agricultural practices.

Through this activity 250 of people (125 women and 125 men) will be trained. Training certificates will be delivered for this activity.

The following activities will be developed to reach Output 2.4:

a) Capacity Building Programme: design and implement a training programme at national and local level to strengthen institutional capacities of AGROCALIDAD, SSC, MAG, ABG, CONGOPE. The training programme will deliver a training certification and will include:

i) Financial mechanisms and incentives developed by the project: this activity aims to disseminate and build capacity for the different financial mechanisms developed by the project, focusing mainly on creating the necessary demand from farmers. The Extension units will be trained in the different requirements and agricultural practices for applying the incentives, loans or any other financial mechanisms created by the project to disseminate and promote their acquisition with the consequent result of reducing agrochemicals and increasing the income of farmers. This activity will also seek to promote the generation of financial mechanisms focused on sustainable agricultural practices beyond

the useful life of the project. As part of the programme, representatives of the different extension units will be involved in the application process that will support the project for their effective learning (In line with Output 2.3),

ii) Sustainable Agricultural: This activity seeks to strengthen each of the identified stakeholders? capacities and knowledge of existing sustainable agriculture practices which result in the reduction of harmful pesticides use. Also favoring the impact on the environment, biodiversity and on public health (both farmers and consumers of different crops.). It will include at least the following:

- Training on risks and safe ways to use pesticides: prevention measures, personal protection equipment (PPE), waiting period between applications. Labelling, Management, Safe Storage and Disposal. Risks on health and the environment.

- Available site-specific alternatives for chemical pesticides (especially POPs/HHP): less hazardous alternatives, biopesticides (microbials and biochemicals).

- Existing technologies driving precision agriculture for small holders?, and its implementation feasibility at local level.[16][16]

- Integrated Pest Management (IPM): Benefits (health, environment, costs, and effectiveness); Disease and pest control measures for IPM: chemical, mechanical, biological, crop control; Pest diagnostic Tools; IPM Tentative Tailored Strategy for Relevant Crops based on local needs. Agroecological and Organic Production approach (in line with Output 3.1).

- Plastic Management: empty containers and other plastics of agricultural use management. Segregation, Triple wash procedure, collection, transport, and disposal/recycling. (in line with Output 2.5)

- Good Agricultural Practices Certification process: scope, benefits, guidelines, and promotion.

b) Manuals of Procedures will be created both to document the training provided and to make this information available for future trainings and accessible at different extension points at the national, provincial, and municipal levels. Both the training and the manuals will consider the adoption of an appropriate language that enables effective communication between the wide variety of actors and audiences to be reached: farmers, financing cooperatives and extension unit staff. The structure of the Manuals will be properly defined during project implementation. In addition, a Massive Online Open Course (MOOC) training will be developed and will be available on the MAATE platform.

Output 2.5: Technical support to government on public procurement to avoid acquiring hazardous substances and removing existing POPs/HHPs stockpiles provided, and capacities to sustainably manage or recycle plastic wastes and other types of waste associated with harmful agrochemicals built.

Through this Output the project will technically assist the Government in developing a national plan to promote the elimination of at least 77 MT of obsolete pesticides identified by PNGQ inventory

updating, stored in different regions of the country. For this purpose, activities will be developed in close coordination with AGROCALIDAD, MAATE, CONGOPE and Private Companies. In addition, this activity will economically assist the national elimination of 58 MT of DDT-contaminated waste owned by the Ministry Public of Health.

Regarding plastic management, this Output will test a business model to demonstrate sound management (including reducing, recycling and recovering) of agrochemical related plastic waste (empty containers, plastic sleeves used to cover and protect fruit during maturation, plastic film used to cover greenhouses and other) which contain POPs or other highly hazardous pesticides for an economically sustainable operation and support a replication strategy.

As per identified in Risk 5 ?Accidental release of POPs pesticides and HHPs into the environment due to improper handling, storage, transport and treatment/disposal containers, exposing the workers, local communities and natural ecosystems.?, a targeted assessment will be conducted for each of the pilot demonstrations (removing existing POPs/HHPs (Activity a) and integrated management of agrochemical-related plastic waste (Activity b)) on risks related to accidental spills and occupational health and safety. The assessment will identify environmentally sensitive receptors that may be affected by accidental releases such that mitigation measures will be developed and included in standalone ESMPs.

The following activities will be developed to reach Output 2.5:

a) Technical support to Government:

National Plan Development: As a first activity, existing obsolete and POPs/HHP pesticides stockpiles will be validated in order to confirm location, volumes, active ingredients, packaging conditions, etc. Additionally, the project will analyze national treatment and disposal capacity for obsolete and POPs/HHP pesticides in accordance to existing international guidelines on Best Available Technologies (BAT) and Best Environmental Practices (BEP) to treat/manage these pesticides in an environmentally sound manner. Based on this, the activity will boost coordination among key stakeholders nationwide (holders, treatment companies, government authorities) and develop a national plan for promoting the treatment/elimination in an optimized way of at least 77 MT of obsolete pesticides identified by the PNGQ inventory owned by holders nationwide.

In addtion, the project will economically support the national elimination disposal of 58 tons of DDT-contaminated waste owned by the Ministry Public of Health.

Hazardous Substances Avoidance: As a first step, this activity will assess and learn from successful experiences of the ProAmazonia Project together with the Secretariat of Public Procurement (SERCOP) to replicate activities aiming at responsible purchase within FARM project scope. This activity will also consider the development/update procedures of public entities to avoid the acquirement of hazardous substances and staff involved in public procurement will be properly trained on these procedures. Especially, the procurement units of the following institutions will be reached by this activity: ARCSA (MSP), AGROCALIDAD, MAG, CONGOPE and municipal governments.

Additionally, to prevent and minimize the expiration of these products, this activity includes the training and awareness raising of main actors in the agriculture value chain (production, distributions, commercialization, and usage) by introducing best practices such as sustainable purchases procedures.

For this purpose, this activity will build upon the efforts already made by the PNGQ and improve the knowledge dissemination.

In particular, this activity will support the National Directorate of Prevention and Control Strategies from the Ministry of Public Health (MSP) to make available procedures in relation to pesticides management (including buying, storage, records, management and disposal) at the national, regional and district levels, in order to improve management of current existences, and minimize the generation of pesticides wastes owned by the national, zonal and district warehouses for the control of metaxenic and zoonotic diseases.

b) Capacity for plastic waste management built:

– A business model will be designed, implemented, tested, and refined to conduct to an economically sustainable operation for integral management of agrochemical?s related plastic waste (empty containers, plastic sleeves used to cover and protect fruit during maturation, plastic film used to cover greenhouses and other) with POPs or Highly hazardous pesticides. A Civil Society Organization (CSO) will be selected and supported with technical assistance and Business Model training to implement the pilot. This to be implemented under conduction of the Project Coordination Unit (PCU) and participation of the crop growers in: i) banana crop production located in El Guabo (El Oro Province) and ii) flowers crop production located in Pedro Moncayo (Pichincha Province).

– The pilot will focus on the application of BAT/BEP for the management of agricultural waste plastics and will look into proper handling: storage, rinsing, shredding, compacting and recycling into semi-finished products. In particular, potential recovery of materials through recycling will be sought. In addition, the pilot will include activities for minimization of plastic use and waste generation as well as the assessment and adoption of alternatives for plastic of agricultural use. Results of pilot will be used to identify the best technologies/practices that can be projected and deployed at national level in a further stage.

– Crop growers will be selected as partners depending on their interest of participation, women participation will be encouraged. Amount and type of plastic waste will be identified and quantified. And from that, management system designed, implemented, tested, and adjusted. At end of pilot, replicability and scalability will be developed and guidelines elaborated, and training implemented for replication. This activity has the potential for job creation through its implementation and replicability.

The sequence of the activity implementation is: a) Preparation of CSO to implement pilot: i) Selection of CSO, ii) Training of CSO, iii) Business model accompaniment; b) Pilot implementation: i) Agreements developed with CSO, ii) Identification of Agrochemical and Plastics and hazardous waste treatment/management enterprises.

This activity will also identify current initiatives for agriculture plastics recycling/downcycling in the country and give support to develop environmental licenses. In addition, will continue to scale up the ?allies of the environment? campaign at the national level to strengthen awareness about the identification, collection, and final disposal of not only empty containers, but also every plastic involved in crop production.

Output 2.6: Development of a competitive fund mechanism to identify and finance innovative proposals and initiatives to reduce the use of HHP.

Through this Output and based on previous successful experiences and lessons learned from the PNGQ and The GEF Small Grants Programme[17], the project will develop a Competitive Fund Mechanism for financing 3 innovative and green agricultural initiatives which comply with the characteristics required.

As per identified in Risk 6, the Competitive Fund Mechanism will incorporate SES criteria during the selection process including assessment of sites of these activities. This will be clarified through an operational safeguard?s procedure for the Competitive Fund Mechanism, to be in place prior to launch of the mechanism. This will include a list of exclusion criteria to eliminate high risk sites and activities that could lead to economic or physical displacement. All proposed grant initiatives will undergo an environmental and social screening to determine the level of assessment/management needed, if any, per the operational safeguard?s procedure.

The following activities will be developed to reach Output 2.6:

a) Competitive Fund Mechanism (CFM) Definition: based on the best practices from the strategy developed by the PNGQ and the Small Grants Programme (SGP), this activity will draft and approve a strategy for the establishment of a competitive fund mechanism stimulating innovative proposals that promote the development of solutions to social and/or environmental problems in the agricultural sector. This competitive fund will consider initiatives with focus on reducing the use of HHP as well as the environmental sound management of agri plastics. The strategy incorporates gender considerations and will promote the empowerment of women in the agricultural sector. An application package (proposal template, budget, implementation period and supporting documentation) and monitoring and reporting procedures are also included within the strategy.

b) CFM Communication: once the mechanism is defined, the Project will proceed to disclose and share information on CFM funding opportunities at national level with project partners and stakeholders. A call for application will be published.

c) Proposals Evaluation: the project will define an Evaluation Committee for analyzing and assessing the received applications, which will be evaluated from a technical and financial perspective. As a result of the evaluation processes, 3 initiatives will be selected to receive support from the project. Among the selected initiatives: i) at least 1 should support an organization with a gender focus/groups led by women, ii) at least 1 should be an academy proposal (or in alliance with the academy). Iii) at least 1 should include plastic waste recycling proposal.

d) Initiatives implementation: The Project will finance the implementation of the activities designed under each of the selected initiatives and will be responsible for periodically monitoring execution and results. Each of the selected initiatives will have a budget of 50,000 USD for the implementation of its activities.

e) Lessons Learned Capture: The Project will guarantee that each of the initiatives document lessons learned through a Final Report and design a communication strategy to disseminate them targeting key audiences in order to promote their replication at national level.

PROJECT COMPONENT 3: CAPACITY DEVELOPMENT AND KNOWLEDGE DISSEMINATION.

OUTCOME 3: INFORMATION & KM PLATFORMS CATALYSE EVIDENCE-BASED DECISION-MAKING AND INVESTMENTS; AND ENHANCE FARM SACLE-UP, REPLICATION AND IMPACT.

Output 3.1: Promotion of participatory research and action in agroecology, to design and implement with farmers and the local population and proposals that increase agricultural sustainability through public and private extension units (Agrocalidad, MAG, Rural Social Security and Private Associations).

Through this Output the project will promote placing producer groups at the center of the agroecological transition process through the introduction of the participatory research and action in agroecology. This approach has two main benefits: i) manages to make a holistic diagnosis of the starting situation that concerns both the farm and the local and larger society, and the definition of a realistic situation with criteria of sustainability; ii) the farmers are mobilized to achieve the proposed goals and establish relationships with constituting networks or associations that manage to facilitate change in different environments, laying solid foundations of rural development sustainable.

The activities under this Output will be implemented in the following selected sites: Santa Cruz (Gal?pagos Islands) and Tosagua (Manab? Province).

The following activities will be developed to reach Output 3.1:

a) Agreement: prior to implementation, an agreement between the involved parties will be signed, documenting the responsibilities and commitments assumed by each of them within the project?s framework. These projects will involve local authorities, crop producers/farmers and local universities.

b) Initial Diagnosis and Participatory Observation: The objective of this phase is to estimate ex-ante the ?local agroecological potential?. That is, the social, ecological, economic, and cultural resources present in the territory that can be mobilized for an eventual agroecological transition. In this phase, mutual understanding between researchers and the social agents involved in the process is key. In this phase, formal spaces for participation and monitoring of the process are built.

c) Participatory Research: A participatory diagnosis of the problems present in the local agricultural production will be carried out, including environmental, economic aspects among others. The analysis will include the establishment of the relationships between the problems (cause-effect, synergies...), categorize them in order of importance, identify solutions, establish an order of priority to implement the solutions, assign tasks and establish a process for monitoring the transition process. This activity converts the diagnosis into an action plan, involving all the local actors in its elaboration and setting up work groups. This Plan includes activities to generate information that reinforces the agroecological transition process and must have the greatest possible legitimacy. Additionally, these activities will be

assessed for their potential water consumption to ensure that efficient use of these resources is done. Participatory research with farmers is essential.

d) Participatory Action: this activity entails the development of the actions included in the action plan, which are structured in working groups. In this phase, dissemination activities are fundamental. The creation of joint work networks between social groups with similar interests (farmers, consumers, technicians, etc.) will be promoted. The objectives of these networks are to generate synergies by launching joint actions, optimizing the use of available resources, mobilizing economic resources, facilitating the exchange of information, supporting initiatives and actions decided within the networks, and serving as a discussion forums. These networks will also contribute to the sustainability of the activities and the expected results.

e) Assessment and Dissemination: this activity involves the verification of the knowledge produced and the evaluation of the effectiveness of the changes achieved as a result of the action through the monitoring of the proposed indicators. This evaluation phase allows both to assess the process itself and to generate continuous information to redirect it if necessary. In addition, the knowledge produced, and lessons learned will be documented in a research report that accounts for the actions, reflections and transformations fostered throughout the investigation. The project will disseminate this information among key stakeholders and beneficiaries.

In addition, this activity will support the coordination and cooperation among key stakeholders (agroecological producers and AGROCALIDAD) to develop a validation/recognition mechanism for agroecological production based on Participatory Guarantee Systems (SPG).

Output 3.2: Facilitate the identification, documentation, systematization, and dissemination, so that key actors at the national and global level receive, share, and apply the knowledge generated by the Project, incorporating an integrated approach that includes the best agricultural practices and non-chemical options.

The following activities will be developed to reach Output 3.2:

a) Lessons learned and Knowledge Captured: In a yearly basis, the project will identify, document, and systematize experiences resulting from the implementation of project activities obtaining lessons learned, rescuing all the knowledge accumulated over years, testimonies and life stories and good practices of the sector, for the generation of guides and/or manuals on best practices implemented throughout the life of the project, incorporating an integrated approach that includes the best agricultural practices and non-chemical options.

Everything done at the local level will be registered and monitored and will serve as a lesson to be taken into account in other similar sectors. The implementation of strategies at the local level will serve as a basis for national level approaches and scalability. The project will seek to involve all relevant actors throughout the project implementation.

b) Knowledge dissemination: the child project will ensure these experiences are available at local level for national stakeholders as well as at global level through the global platform envisioned under FARM and outreach strategies.

For this purpose, existing knowledge platforms in agricultural, financial inclusion, and other relevant areas to share findings will be equally used and promoted. These platforms include the Green Growth

Knowledge Platform (GGKP), Centre for Agriculture and Biosciences International, the GEF?s Global Knowledge to Action Platform, and UNDP Green Commodities Programme.

c) Implement the Stakeholder Engagement Plan detailed in Annex 8 and briefly described in following section ?Stakeholder Engagement?.

d) Implement the Gender Action Plan detailed in Annex 10 and briefly described in following section ?Gender equality and Women?s Empowerment? for gender mainstreaming and raising awareness at different levels of related key targeted groups.

e) National Replication and Sustainability Plan Design: during fourth year of project implementation, the design of both a National Replication and Sustainability plan will be supported.

The National Replication plan will define the strategy to replicate project and Global programme results broadly in Ecuador. For that purpose, it will also identify suitable financial mechanisms, available programmes or national strategies that can support its implementation the following years.

Regarding the Sustainability plan, it seeks to ensure obtained results after project completion. The plan will identify and document suitable mechanisms and associated responsible for guaranteeing the sustainability of each output of the project.

Both plans will be properly disseminated among key stakeholders.

Output 3.3: Training and capacity building provided. Awareness, dialogue, and exchange strategies created to help the rural sector create healthy organic farming and connect its work with responsible consumers.

The main objective of this Output is to build capacity in farmers by providing knowledge and information for the adoption of sustainable agricultural practices and promote sharing experiences among them. This Output will also guarantee the dissemination of the knowledge produced and lessons learned during the implementation of Output 3.1. In addition, the project will connect their work with responsible markets and responsible consumers, as well as raise awareness in the general public about healthy crops and promote their demand.

This Output will evidence the training of 1,400 farmers (700 men and 700 women) as well as raising awareness of 2,000 people (1,000 men and 1,000 women).

The following activities will be developed to reach Output 3.3:

a) Training Workshops: so that farmers can learn about IPM, organic production and agroecological assessment approach to pest and disease management at the farm level. Farmers will be trained in: pesticides hazards, pesticides and plastics waste management, recognition of the important organisms (pests and beneficials) in their fields, the biology and ecology of the organisms, how to determine pest population levels, how to choose the best method and product for control, available alternatives to hazardous chemical pesticides, existing accessible technologies for precision agriculture and how to make decisions in the fields according to their new understanding and simple cost-benefit analysis. Provide information with clear evidence that implementing sustainable agricultural practices not only generates savings but also creates value for their crops and that the market is willing to pay a differential price for it. Indicators will be identified to monitor the effectiveness of the training.

The project will consider Public Private Partnership model with IT to promote best agricultural practices, organic and agroecological production using digital technology. This could contribute to address digital gaps in the rural area.

b) Communication strategy: design and implement a communication strategy (Use of SMS, radio, social media, community meetings[18][18], government extension workers and retail outlets)

c) Farmer to Farmer Exchange: coordinate periodical exchanges among farmers in order to promote dialogue and to discuss and share experiences related to the implementation of sustainable production practices.

d) Support the development of policy and legal framework for Good Agricultural Practices (GAP) and Organic Agriculture (OA): support the family farming stamp, the organic and GAP certifications, with easier group development, and transparent, efficient certification processes to promote market trust.

e) Responsible markets promotion: This activity will be coordinated with the Ministry of Production, Foreign Trade, Investment and Fishing (MPCEIP) and the project will ensure access to responsible markets by bringing in long-term offtake agreements. By collectivizing the supply side, smallholder programmes can leverage the bargaining position of farmers, increasing the value they receive for their crops. Developments in the agtech space relating to the setup of digital marketplaces can offer solutions to initiatives targeting smallholder inclusion. The project will support the strengthening and scale up of existing marketplace platforms such as ?La Cosecha del D?a/Day?s Harvest? (Heifer Ecuador). The project will undertake an assessment to identify opportunities for healthy organic farmers to sell responsibly produced crops at a higher price. The project will negotiate at least 5 agreements with responsible markets.

f) Awareness raising campaign: This activity will design and implement an awareness raising campaign. The main objective will be to create consciousness on general public in order to create responsible consumers for demanding healthy organic products. Information related to the impacts on health and the environment due to pesticides will be shared. Additionally, difference in products appearance due to different agricultural practices adopted will be informed as well as different markets where healthy production can be bought for consumption.

Output 3.4: Promote the exchange of knowledge and experiences in South-South cooperation schemes and among the actors of the global program to strengthen the capacities of the regions in sustainable development of agriculture, considering buyers and producers, to ensure motivation in the use of best environmental practices to offer sustainable products through the global component.

Through this Output the project will support the programme strategy based upon the generation and dissemination of knowledge required to scale up the adoption of agricultural practices that reduce the use of harmful agricultural inputs. Knowledge and information generated in each of the Components of this child project will be captured and shared

The following activities will be developed to reach Output 3.4:

a) Close coordination and exchange of information and sharing of best practices will be ensured with the Global FARM Programme and with the FARM child projects in Uruguay, Kenya, India, Vietnam,

Lao PDR, and Philippines, fostering an environment of south-south cooperation. This exchange of information and good practices will be in both directions. On one side, the project will learn from the experiences (success and failures) and knowledge produced by the Global Programme and the other child projects and ensure the sharing of the relevant information among national key stakeholders. On the other side, knowledge products, lessons learned and dissemination activities at local and national levels will be shared with the Global Programme, which will capture, store, package and disseminate this knowledge to a global network, including the Stockholm Convention Secretariat and SAICM, in line with the approved FARM Knowledge Management (KM), communications, stakeholder engagement and gender strategies. The global project will make these experiences available through the global platform envisioned under FARM and outreach strategies. The child project will participate actively in international meetings and events and ensure the flow of information between international conventions, donor agencies and critical stakeholders and decision-makers at regional, national, and local levels.

The approach will aim to connect local and global practitioners and decision makers from governments, civil society, and business of other countries involved in the global FARM programme. Through the Global Component the project will connect international buyers and local producers, to ensure the buyer motivates the producers in using best environmental practices and best available techniques to provide responsible products.

PROJECT COMPONENT 4: MONITORING AND EVALUATION.

OUTCOME 4: MONITORING AND EVALUATION.

Output 4.1: M&E and adaptive management applied to assess project performance and GEB impact.

The project results as outlined in the Project Results Framework (Section V), will be monitored periodically during implementation to ensure that the project effectively achieves its results. The results of the evaluations will be reported in an intermediate and final evaluation and the lessons learned captured will be integrated in the project through adaptive feedback management. Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy.

As a standard practice for every UNDP project, continuous monitoring of FSP results and achievements will be ensured, while the application of adaptive management of the project after conclusion of the Mid-Term Review (MTR) will be warranted. The Project Management Unit (see Section VII on Governance and Management arrangements for detailed information) will design the project?s M&E system and be responsible for implementing the project?s M&E Plan (see Section VI below), including the Project?s Inception Workshop, annual planning workshops and Project Implementation Reports (PIRs).

The following activities will be implemented to achieve Output F.1:

a) Development of Project's Inception Workshop.

b) Monitoring:

i. Project Results Framework (outcome indicators, GEF Core Indicators, baseline, and annual target indicators).

ii. Project Risk Matrix, Environmental and Social Framework/Social Environmental Screening Procedures (ESMF/SESP), the Gender Analysis and Action Plan, and the Stakeholder Engagement Plan.

c) Holding Project Steering Meetings.

d) Carrying out ?Mid-Term Review? (MTR): The MTR will be carried out after the second submission of the PIR; it will assess the progress of each project activity and attainment of the project?s indicators presented in the Project Results Framework (Section V) and Multiyear Work Plan (Annex 4). This review will also consider one Gender Assessment of project impact completed as part of MTR and the disbursement of financial resources and co-financing provided by project partners, and it will monitor and assess administrative aspects for the execution of the project. The MTR will also inform the adaptive management of the project and improve its implementation as a remainder of the project?s duration.

e) Carrying out Terminal Evaluation (TE): The TE aims to evaluate whether all planned project activities have been developed, resources granted by the GEF have been disbursed and spent in line with GEF and UNDP policies and rules, following activities as set out in this Project Document. The TE will also extract and identify lessons learned, how to disseminate them most efficiently and make recommendations to ensure that project results are sustainable.

Output 4.2: M&E tools provided to evaluate progress, challenges and lessons learned; and for ensuring future sustainability of achievements made through the project in reducing/ replacing HHPs and waste.

Through this Output, the project will support the FARM Programmatic M&E approach which aims to access and compile all child projects? data, make it available (pull) and present it regularly (push) to project stakeholders. The objective of this output will be to ensure overall coordination, monitoring and evaluation of the Global FARM Program as a whole.

Global FARM Programmatic Monitoring and Evaluation

In addition to the M&E requirements for each child project as per the usual requirements of the Implementing Agency, the FARM Programme also has programmatic monitoring and evaluation requirements as set out by the GEF Policy on Monitoring (ME/PL/03). The Lead Agency (UNEP) and Global Coordination Child Project reports annually to the GEF Secretariat on program-level results. GGKP will prepare a FARM Annual Progress Report documenting progress towards program level outcomes, major milestones achieved in the FARM program and FARM engagement in regional or global fora. This report will be based on information provided by the child projects. The programmatic M&E system is designed to fulfil the following requirements.

i) To promote accountability by tracking progress towards achieving:

- The Global Environmental Benefits (Core Indicators)

- The sum of progress towards child project outputs and outcomes as described in the child projects? results frameworks (FARM Common Indicators)

ii) To promote learning through knowledge generation and sharing program experience and best practices with internal and external stakeholders.

GGKP will develop program dashboard to allow stakeholders and interested individuals to see progress against the results consolidated from all child projects. The set of FARM Common Indicators will supplement the GEF Core Indicators and provide more granular detail on the progress and learning of the child projects. These Programme Indicators will be developed during the first year of implementation but be strongly based on the child projects? log frames.

The joint planning, monitoring and evaluation cycle will use existing plans and reports produced by the child projects wherever possible to minimize additional reporting burden:

a) Each child project prepares and copies their annual work plan to GGKP in December / January. This will be consolidated by GGKP into the draft FARM global workplan focussing on shared, cross cutting activities such as communication, knowledge management, global, stakeholder engagement etc. GGKP, in its global coordination role will establish regular and informal contact between technical experts in the different child projects, on four cross cutting aspects - Knowledge Management, Communication, Stakeholder engagement and Gender. They will coordinate regular (quarterly) thematic working group meetings for the different cross cutting themes to maximise learning and establish an active and connected FARM Community of Practice These will be virtual meetings, combined with interactive online functions like the GGKP Green Forum or SAICM Communities of Practice.

In addition to the periodic reporting, the FARM programme will also organize regular events for information sharing and coordination.

a) Annual FARM Coordination Meeting of the Programme Coordination Group (Implementing and Executing Agencies of the child projects, takes place in Feb-March each year. This meeting will review progress, review workplans from the child projects, and provide coordination between projects.
b) Bi-annual FARM Partners Forum. This meeting provides the opportunity for a wider group of stakeholders (e.g. child projects Executing Agencies and delivery partners) to share lessons, knowledge and communications, in order to inform annual planning for the next year. Child projects will fund the participation of their key representatives at the Forum, while the global child project will also include budget to invite non-FARM participating countries on a regional rotation (Date: October)
c) GGKP, in its global coordination role will establish regular and informal contact between technical experts in the different child projects, on four cross cutting aspects - Knowledge Management, Communication, Stakeholder engagement and Gender. They will coordinate regular (quarterly) thematic working group meetings for the different cross cutting themes to maximise learning and establish an active and connected FARM Community of Practice

At implementation midterm, and as child projects conduct their separate midterm reviews (MTR), the Implementing Agencies will share the reports with the Lead Agency. UNEP will compile a summary of

lessons learnt and recommendations for corrective actions to present and discuss at the Programme Coordination Group.

Following the independent Terminal Evaluation (TE) of each child project, the Lead Agency will also conduct a Programmatic Terminal evaluation in accordance with GEF evaluation guidelines (REF). The TE of FARM program will be carried out by the UNEP Evaluation Office. The TE of FARM will provide an independent assessment of project performance (relevance, effectiveness, and efficiency) and determine the likelihood of impact and sustainability.

d) Alignment with GEF focal area and/or Impact Program strategies.

The alignment with GEF focal area strategies is the same as presented at the PIF stage.

The project is aligned to the following Focal Area objectives:

CW-1-2 Sound management of chemicals and waste addressed through strengthening the capacity of sub-national, national and regional institutions and strengthening the enabling policy and regulatory framework in these countries.

e) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing.

Component 1.

Contributions from the baseline:

In Ecuador, the agricultural sector is of great importance to the economy, being one of the main sources of employment in the country. Agriculture is also considered one of the main activities that generates large incomes being one of the main pillars of the national economy. Furthermore, the agricultural sector contributes approximately 70% of the food consumed in the country, making it vital for food security and sovereignty

With the objective of establishing an environmental sound management of hazardous agrochemicals within its lifecycle, Ecuador has made significant efforts in the implementation of different international environmental agreements and guidelines:

To address the threats posed by POPs and HHP and related wastes, the Government of Ecuador signed both Rotterdam and Stockholm Convention in 1998 and 2001 respectively. The country is also party of Basel Convention and is a signatory of the Montreal Protocol. The Stockholm Convention on POPs was ratified on June 7, 2004, and the country prepared a National Implementation Plan (NIP) in 2006 and updated it in 2009. The priorities set in the updated version included: i) Continuous improvement for pesticides management and ii) Reduction of unintentional POPs (UPOPs) emissions among others.

In addition, Ecuador is also a signatory of SAICM, and as such, has undertaken efforts to ensure the effective implementation of the objectives of the Global Plan of Action in the country. The National Action Plan for the Implementation of the Strategic Approach for the Management of Chemical Products (SAICM) aims to progressively reduce the risks to health and the environment associated with Chemical Products throughout their life cycle in a process of continuous improvement, within the framework of sustainable development.

Likewise, Ecuador is a member country of the Andean Community of Nations (CAN). Through the Andean Technical Committee for Agricultural Health (COTASA) it seeks to develop standards, common programmes, and projects with a regional impact to maintain and improve the competitiveness of agricultural production. The Andean work on plant health can be summarized in four main aspects: phytosanitary measures, pests of regional interest, chemical pesticides for agricultural use, activities in international forums. The Andean Community issued Decision 436/1998 to establish requirements and harmonized procedures for the registration and control of chemical pesticides for agricultural use and to regulate their use and correct handling. The goal is to prevent or minimize damage to health and environment as well as to facilitate trade in the sub-region. Manufacturers, importer, exporters and wholesalers of pesticides for agricultural use must be registered by the competent national authority, and special permits are required for research and scientific experiments.

Despite taking steps towards addressing the use of harmful agricultural chemicals, pesticide use in farming practices remains a major issue of concern in the country. Between 2017 and 2021, total agrochemicals imports increased on an average of 8% annually, reaching in 2021 near 53,000 ton of which 14,000 ton belongs to harmful agrochemicals (where Paraquat, Chlorpyrifos and other HHP can be highlighted). These agrochemicals are being used in permanent crops (such as banana, cacao and flowers) and in transient crops (such as vegetables, potatoes, maize, rice, corn).

Contributions from Co-financing:

MAATE, AGROCALIDAD, MAG, MSP, SENAE, ABG, CONGOPE will strengthen human resources to improve and strengthen cooperation and coordination between government authorities with competence in the area and for a smooth exchange in the information required for the management of agrochemicals and agriplastics in the country.

The mentioned government authotrities will also support the project by sostaining existing legal frameworks application, monitoring and enforcement activities, trainings under their competencies that ensure and contribute to the LCM of agrochemicals and agriplastics within the country.

Contributions from GEFTF:

The funding will be used to support the development of a National Harmful Agrochemicals Reduction Plan which will enable the identification of less harmful alternatives and promote the reduction of POPs, HHP and other hazardous agrochemicals of national concern identified in use within the country (Output 1.3).

In addition, strengthening the pesticides registration process through building capacity of the National Technical Committee on Pesticides and support the adoption of the FAO pesticide registration Toolkit. Fundings will be also destined to design and implement an action plan targeting key stakeholders that promotes the application of the ethical principles and guidelines set forth in International Code of Conduct on the distribution and use of pesticides (Output 1.2)

Trainings to relevant government authorities to enforce the application of existing regulations for the LCM of agrochemicals and agriplastics as well as minimizing the illegal trade of harmful agrochemicals will be also funded by the project. (Output 1.1 and Output 1.4). Futhermore a an Official Information Exchange platform will be assessed and implemented to strengthen the national waste management system by imporving traceability and information sharing among competent authorities to speed up decision making and waste management. (Output 1.4)

Lastly, under this component funds will be destined to support the development of a legal roadmap to improve LCM of agrochemicals and agriplastics and support the drafting of the identified required legal instruments. (Output 1.5)

Component 2.

Contributions from the baseline:

Addressing issues related to the management of agricultural chemicals has required, and will continue to require, mobilization of resources, from government budgets, finance institutions and private sector involvement.

The national financial system (SFN) is made up of the public, private, and popular and solidarity sectors, which intermediate resources from the public. The SFN formed by private and public banks is the main financier of this sector with a participation of 82.9%; while the Superintendence of Popular and Solidarity Economy (SFPS), formed by savings and credit cooperatives and mutuals, financed 17.1%. Delving deeper into the agriculture, forestry, livestock, and fishing sector, it is observed that in the period 2016-2021, the volume of credit granted by the entities of the national financial system (SFN) and the popular and solidarity financial system (SFPS) was equivalent to 2.8% of GDP and with a participation of 8.4% in relation to the total volume of credit at the national level, on average for the period.

On the orther hand, 14 tax incentives associated with Sustainable and Deforestation-Free Production have been identified in Ecuador. Of which, seven would be favorable, four favorable as long as they are conditioned (if limits are established) and three unfavorable. One of the negative tax incentives identified is that inputs imported or purchased in the domestic market for the agricultural, aquaculture and fishing sectors, including HHPs and other hazardous agricultural chemicals, do not pay VAT.

Furthermore, currently the country has initiatives that promotes and support the implementation of sustainable agricultural practices: Good Agricultural Practices (GAP) certification and Organic Production. By January 2022, out of the 843,000 UPA only 720 were certified in Good Agricultural Practices (GAP) for crops, representing less than 0,1% of the total. Additionally, near 65% of the

certified UPAs belongs to export crops and specifically 394 (54.7%) are certified for banano crop. In terms of organic production, Ecuador currently has a legal framework for its regulation. However, by 2019 total organic annual production represents only near 5% of the total crop production and only 2% of the total hectares destined for crop production. Within organic crop production, the Proamazonia Project has made a significant contribution mainly on the coffee and cocoa crops, allowing the entry of these Ecuadorian products to international markets with differentiation in terms of quality and sustainable production.

– Notwithstanding commitment and political will to reducing the use of agricultural chemicals, achieving this will be a major challenge without inclusive finance and investing in human capital (skills, knowledge abilities) of farmers and supporting institutions and value chain actors (extension units, etc.) on access to finance and markets, business management, organization, climate resilient practices, and environmentally sound management of waste.

Contributions from Co-financing:

INNOVAGRO, APCSA as private sector associations representing agrochemicals companies will support with training, raising awareness activities as well as storage, collection, treatment and disposal activities of empty containers under the EPR systems established.

CONAFIPS will support with resources from CAF (Latin Amercian Development Bank) that will be channeled through savings and credit cooperatives, financial institutions that will operate the credit service to farmers.

AEBE as Banana Exporter Association will support through training and awareness campaigns on the safe use and handling of agrochemicals, certifications, implementation of management plans, environmental licenses, among others in the field of banana crop production.

CONGOPE as consortium of provincial governments will support with technical human resources under the Environment and Productive Promotion.

In this Component MAATE will contribute with technical staff from the Direction chemicals, hazardous and non-hazardous wastes and residues and Proamazonia Project.

Contributions from GEFTF:

The project will fund the development of studies such as the Economic Valuation Studies (Output 2.1) and the fiscal incentives assessment (Output 2.2) to support policy making by introducing feasible recommendations to implement in the country in the process of reducing the use of harmful agrochemicals with focus on POPs and HHP.

Under this component the project will contribute to the capacity building of financial institutions for them to be able to develop suitable financial mechanisms for farmers who adopt sustainable agricultural practices as well as the capacity building of farmers for them to access and apply this financial products within their farms and crop production systems. Within this activity the project will

specifically support 5 farmers in applying and obtaining soft credit available through the programme created by the project. This activity will include the certification of these farmers in GAP. (Output 2.3)

In addition, the support of GEFT will be given to build capacity in Extension Units (AGROCALIDAD, Ministry of Agriculture and Rural Social Security), as well as private associations access financial mechanisms and incentives created by the project and on better sustainable agricultural practices. (Output 2.4)

The project will subsidize two pilot projects for the improvement of agri plastic waste management sharing cost with the private sector and building national capacity through the implementation by CSO. In addition GEF funds will be destined to eliminate DDT stockpiled owned by the Ministry of Helath. (Output 2.5)

The project will fund the implementation of 3 innovative initiatives for the reduction of harmful agrochemicals selected by the Competitive Fund Mechnism (Output 2.6)

Component 3.

Contributions from the baseline:

In the context of Ecuador, where coordination among competent authorities on agrochemicals management is required, not only public authorities at national and local level should be targeted. Engaging private sector, CSO, responsible markets, universities, research institutes, and mainly crop producers for shifting agriculture sector to a low/non chemical production needs to be addressed.

Additionally specific training, experiences exchange, communication strategies and awareness-raising programmes to farmers and general public needs to be developed for improving results sustainability.

Contributions from Co-financing:

ABG as the Agency for the Regulation and Control of Biosafety and Quarantine for Galapagos will support with technical officers reources from its regulation and prevention unit.

HEIFER as NGO which promoted rural development in Ecuador will contribute with rosources funding initiatives that encourage sustainable agriculture production in Ecuador.

UTMACH as Technical University Will support with researchers, laboratory staff, reagents and materials.

In this Component MAATE will contribute with technical staff from the Direction chemicals, hazardous and non-hazardous wastes and residues, Subsecretary of Climate Change, Undersecretary of Natural Heritage, Direction of processes, services and change management, among other initiatives.

Contributions from GEFTF:

The project will subsidize the implementation of two pilot projects promoting the participatory research and action in agroecology which has two main benefits: i) manages to make a holistic diagnosis of the starting situation that concerns both the farm and the local and larger society, and the definition of a realistic situation with criteria of sustainability; ii) the farmers are mobilized to achieve the proposed goals and establish relationships with constituting networks or associations that manage to facilitate change in different environments, laying solid foundations of rural development sustainable. (Output 3.1)

The project will fund a national communication strategy and mechanisms of raising awareness, training and face to face exchange targeting rural sector for promoting the adoption of sustainable agricultural practices and at the same time support the promotion and link to responsible markets. (Output 3.3)

Finally, the project will support the capturing of lessons learned and knowledge generated by the project and ensure its dissemination among national stakeholders as well as Global Programme and other Child Projects, aligned to Global Programme Knowledge Management and Communications Strategies. (Output 3.2 and 3.4)

Component 4.

Contributions from the baseline:

The Ministry of Environment, Water and Ecological Transition (MAATE) to ensure the project?s objective of reducing the use of harmful agrochemicals by supporting farmers to access finance, innovative and sustainable production practices and competitively access consumer markets in the country, will require multiple coordination of key stakeholders and proper tools in place to guarantee effective implementation and the adoption of adapatative management if required.

Contributions from Co-financing:

The government as well as proactive participation of stakeholders at every level will contribute to the effective implementation of the project. The MAATE associations will provide in-kind contributions in the form of human resources and/or facilities/office supplies for holding events, forums, workshops, trainings, courses and awareness-raisings.

Contributions from GEFTF:

The project will support the a project monitoring and evaluation system with its mid-term and final evaluation reports to assess project performance and GEB impact (Output 4.1), as well as the support of

the Global FARM Programmatic Monitoring and Evaluation approach to ensure future sustainability of achievements (output 4.2).

f) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF).

The Global environmental benefits (GEB) of the project at the CEO endorsement stage are the same as presented at the PIF stage.
The project?s GEBs include the following:

a) # direct project beneficiaries disaggregated by gender: 7,800 (women: 2,721 and men: 5,079).

b) Greenhouse Gas Emissions Mitigated (metric tons of CO2e): 322 MT of GHG emissions mitigated

c) Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials, and products (metric tons of toxic chemicals reduced): 1,000 MT of pesticide avoided (290 MT of POPsand 710 MT of HHP).

d) Reduction, avoidance of emissions of POPs to air from point and non-point sources (grams of toxic equivalent gTEQ): 4.6 gTeq of emissions avoided.

As agreed during the FARM design phase the GEBs are measured 5 years after project implementation. The accrued GHG mitigated will arise to 1,128 MT in Ecuador five (5) years after project implementation. The total amount of POPs/HHPs pesticides avoided will arise to 2,700 MT (783 MT of POPs and 1,917 of HHP) in Ecuador five (5) years after project implementation. The accrued avoidance of POPs emissions to air will arise to 19.7 gTEQ in Ecuador five (5) years after project implementation.

g) Innovativeness, sustainability and potential for scaling up. ?

Innovation

This programme will represent one of the first concerted efforts to reduce the use of harmful agrochemicals on a global scale using an integrated approach linking international conventions, multilateral development banks (MDB), national agriculture and environment agencies, commodity groups, agrochemical and agri-plastic manufacturers, and farmers. The programme will assist to link and improve the efficiency and effectiveness of information flow between each of these stakeholder groups and generate improved approaches and templates for addressing the perverse incentives that drive the use of harmful agrochemicals, while leveraging finance towards the broader adoption of low and non-chemical alternatives. This will include regulatory frameworks, financial incentives and access to knowledge required to uptake improved approaches. The programme will target and engage the private sector along with investors to make sure impacts are sustained.

At Ecuador child project level, the proposal is innovative since the approach is based on creating the necessary conditions at the national and local level to promote the reduction in the use of harmful

agrochemicals and plastics within the agricultural sector. This approach differs from previous projects implemented in the country where environmental disposal/elimination of POPs/HHP pesticides was effectively supported.

Under Component 1 the project will put in place a National Plan for promoting the reduction of HHP through the gradual substitution/restriction/prohibition of these agrochemicals by ensuring the availability of less hazardous alternatives with effective results for agricultural production in the national context. Additionally, the project will stimulate the institutional strengthening, the design and the implementation of regulatory frameworks, and enabling environments for the agriculture sector that fully integrate and address the issue of harmful agrochemical use.

Under Component 2, the innovative approach is related to the following aspects:

– Conduct studies and generate information in terms of economic impacts due to consumption of agrochemicals and fiscal incentives, to promote evidence-based policies development.

– Create financing programs and promote risk management of value chains, applying concepts of green recovery considering environmental quality criteria (pollution), adaptation and mitigation of climate change. Efforts will be further conducted to technically support farmers for its application in targeted crops.

– Promote innovative initiatives for the reduction of harmful agrochemicals and agri plastic management by supporting three (3) proposals evaluated through a competitive fund mechanism designed by the project.

– Capacity built in plastic management for agriculture use through the implementation of 2 demonstrative projects aiming at reducing, replacing and/or recycling

Throughout these activities the FSP will also guarantee the strengthening of financial institutions, extension units as well as private associations on the different financing alternatives and sustainable agriculture practices to adopt in the sector. This is important for the long-term sustainability of the project as it institutionalizes access to finance for farmers at the local level and recognizes that GEF donor funds can only go so far.

Under Component 3, the innovative aspect introduced by the project is that research and information related to the improvement of agriculture practices designed to assist farmers with evidence-based results will be supported through the implementation of two (2) pilot projects. These projects will conduct activities of site specific participatory and action research in agroecology with the proper involvement of farmers, proving that sustainable agriculture that reduces reliance upon chemicals can deliver productivity that results in global environmental benefits, healthier communities, and strong investment returns. Furthermore, efforts will be implemented for joining farmers for knowledge and experiences sharing as well as linking them to responsible consumers for their added value products.

Sustainability

The programme?s sustainability will be ensured through integration and embedding of results with global and national decision-making frameworks. Globally, the close involvement of the Stockholm Convention Secretariat and linkages with international private sector (agrochemicals, biocontrol, and

crop certification and commodity schemes) will provide opportunities to consult with and provide solutions for a much wider range of stakeholders than those directly involved in the programme.

The sustainability of the project interventions beyond its completion will be mainly guaranteed as follows:

Under Component 1, the development of a National Reduction Plan for reducing the use of harmful agrochemicals which includes the development of necessary methodologies and procedures for identifying, evaluating, registering, and effectively adopting safer alternatives in the context of the agricultural activity in Ecuador. This plan establishes a systematic approach for the country to address not only the agrochemicals of current concern but also upcoming ones in line with international commitments and international trade agreements.

Additionally, after the project implementation Ecuador will have a strengthened policy and regulatory framework, an enhanced institutional capacity for the life cycle management of agrochemicals and their wastes (including plastics for agricultural use).

Under Component 2, the project will promote the development of financial products that will be available beyond the lifetime of the project. To strengthen sustainability in terms of the availability of financing for farmers who implement sustainable agricultural practices with the consequent reduction in the use of agrochemicals, the project will build technical capacity among the main actors in the value chain. These actors, who are responsible for the gradual transition in following years after project implementation, are: i) financial entities in order to continue developing financial mechanisms tailored to sustainable agriculture; ii) national extension units in order to disseminate and promote the adoption of sustainable agriculture practices and access to financial mechanisms and iii) farmers to be able to apply to these mechanisms for adopting sustainable practices.

The foregoing, in conjunction with the development of economic studies and the recommendation of fiscal incentives, the project will help to increase the flow of local and international investment capital and impact-oriented lenders to sustain the transition to a low/non-chemical agriculture over time once this FSP is completed.

Under Component 3, the project will guarantee and improve the connection of farmers producing in a sustainable manner with responsible markets and consumers. This will enable farmers continuing implementing sustainable practices beyond the life of the project as their products are being properly demanded. Furthermore, a ?Sustainability Plan? will be designed during the last year of implementation for the sustainability of the obtained results after project completion, identifying suitable mechanisms and associated responsible parties.

Additionally, the project will document in a systematic way lessons learned and experiences and make them available through the Global FARM Knowledge Management Platform as well as receiving those ones from other child projects within the Global FARM Programme. Documentation and systematization of lessons learned will also apply to Components 1 and 2.

Potential for Scaling Up

It is estimated that over 2 billion people worldwide work in agriculture and the sector generates more than US$ 3.4 trillion annually[19][19]. In LDCs, agriculture employs more people than any other industry. The potential for scaling up is vast. The programme has been designed to integrate and promote up-scale and amplification of successful experiences, for example by building capacities at the global, regional, national, and producer levels to access and share information and results. The child project in Ecuador will aim to connect local and global practitioners and decision makers from governments, civil society, and business of other countries. The child project will use the global component to connect international buyers and local producers, to ensure the buyer motivates the producers in using best environmental practices and best available techniques to provide responsible products. Component activities will aim to strengthen practitioners? capacity ? virtually and through inspiring face to face encounters and events ? on issues relevant across multiple crop supply chains and landscapes. This will foster a community of practice among participating countries and will allow for the sharing of successful models with a wide range of global actors and stakeholders.

The capacity building approach mainstreamed in all components is to ensure knowledge and experiences stay in country within relevant institutions. Under Component 1, the project will increase the capacity of government institutions at national and local level to assess, plan and implement sustainable agricultural practices as well as the introduction and availability of safer alternatives. The adoption of international standards and tools will be adapted and implemented in accordance with national context involving main stakeholders in the agrochemicals value chain. Policies and the regulatory framework will be improved as well for creating an enabling environment for the reduction of harmful agrochemicals in agriculture.

When the project comes to an end the increased capacity of national entities and local authorities and the improved policy and regulatory enabling environment for sustainable agriculture production will continue to serve the agriculture sector and encourage continued phase-out harmful agrochemicals together with the rapid identification of safer alternatives within the agriculture sector.

Under Component 2, the project will assess feasible fiscal incentives for the reduction of harmful agrochemicals and support the implementation of at least one of them. This fiscal incentive is expected to continue after the project lifetime and enable the benefits for scaling

The project will partner with financial entiy(ies) to establish tailored financial products and with affordable financial conditions for farmers who implement good agricultural practices (such as Integrated Pest Management (IPM), agroecological practices, organic production, etc.) that enables the reduction of hazardous pesticides in priority crops. The project will do this by supporting these entities to develop financial products for the agriculture sector and build their capacity to undertake financial risk assessments, with the purpose of eventually increasing the amount of financing made available through these new or improved financial mechanisms. These financial products will continue to exist after the project comes to an end; banking farmers is a private sector sustainability proposition that goes beyond donor funds.

As part of the project, selected farmers of targeted crops will also be trained in how to develop these financial products applications and how to apply for loans. Results of this support will be captured so that information can be easily disseminated and replicated by other farmers. Extensions Units

(Agrocalidad, MAG and SSC) will be properly involved during this process for building their capacity and further contribute to the replication in different crops and regions in the country.

Furthermore, the project will support the implementation of: i) two (2) demonstration projects will be conducted for evidencing environmentally and economically viable solutions for minimizing, substituting and/or recycling plastics currently being used in targeted crops, and ii) three (3) innovative initiatives for reducing the use of harmful agrochemicals through the development of a competitive fund mechanism.

The results from these experiences will be scaled up through lessons learned captured and proper dissemination among key stakeholders for building capacity nationwide.

Under Component 3, throughout the project?s implementation, project results, experiences, lessons-learned, knowledge products, dissemination activities will be shared with the Global Programme, which will capture, store, package and disseminate this knowledge to a global network, including the Stockholm Convention Secretariat and SAICM, in line with the approved FARM KM, communications, stakeholder engagement and gender strategies. The global project will make these experiences available through the global platform envisioned under FARM and outreach strategies. The child project will participate actively in international meetings and events and ensure the flow of information between international conventions, donor agencies and critical stakeholders and decision-makers at regional, national, and local levels.

Additionally, the project considers deloping a National Replication Strategy to replicate project and Global programme results broadly in Ecuador enabling the sacling up of results.

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[1] National Institute of Statistics and Census (INEC), https://www.ecuadorencifras.gob.ec/estadisticas/ - March 2022

[2] http://sipa.agricultura.gob.ec/index.php/indicador-agrosocial

[3] http://sipa.agricultura.gob.ec/index.php/indicador-agroeconomico

[4] https://www.agricultura.gob.ec/ecuador-promueve-inversiones-en-sector-agropecuario/

[5] National Agricultural Census (2000), https://www.ecuadorencifras.gob.ec/censo-nacional-agropecuario/

[6] Survey of Surface and Agricultural Production ? ESPAC 2020, https://www.ecuadorencifras.gob.ec/estadisticas-agropecuarias-2/

[7] http://sipa.agricultura.gob.ec/index.php/cifras-agroproductivas

[8] Main companies that make up approximately 80% of imports, in descending order. http://sipa.agricultura.gob.ec/index.php/comportamiento-insumos/comportamiento-2020.

[9] Survey of Surface and Continuous Agricultural Production (ESPAC) 2020

[10] Includes: pesticides expired, without registration, deteriorated, without label, contaminated material and prohibited.

[11] Executive Summary of the Territorial Diagnoses of the Agrarian Sector - https://www.agricultura.gob.ec/wp-content/uploads/2020/08/Resumen-Ejecutivo-Diagn?sticos-Territoriales-del-Sector-Agrario_14-08-2020-1_compressed.pdf

[12] 2017 and 2018 data were estimated based on GRECI information (2019, 2020 and 2021).

[13] Latin American Center for Rural Development https://www.rimisp.org/wp-content/uploads/2022/04/13-Ecuador.pdf

[14] Demonstrations will be framed within AGROCALIDAD or the CAN established regulatory framework. If no legal procedure available, the tests will be conducted based on the best available practices at international level.

[15] The agrochemicals to be targeted in the scope of the studies will be defined at project implementation phase in consultation with the National Technical Committee on Pesticides.

[16] https://www.undp.org/publications/precision-agriculture-smallholder-farmers

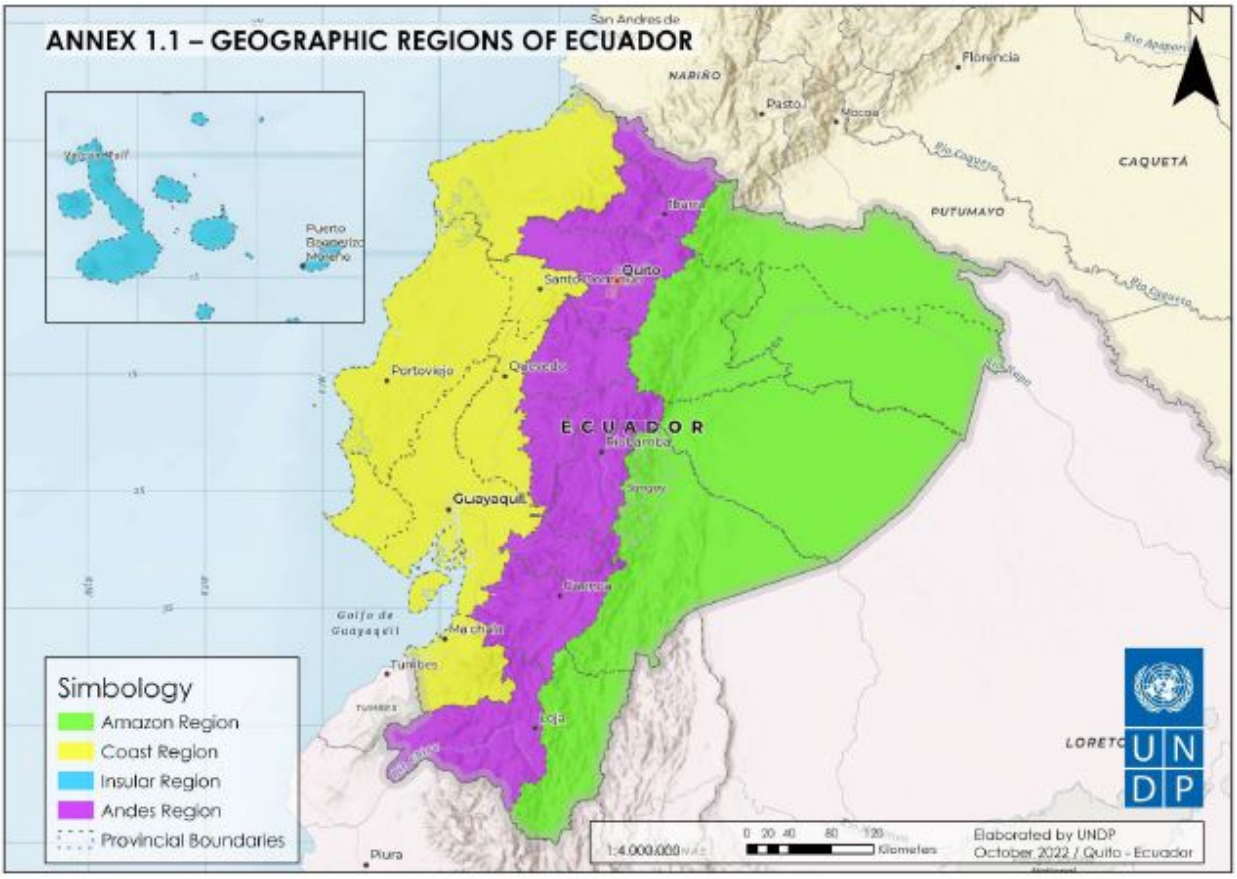
[17] Resak: https://www.youtube.com/watch?v=MZIVTmo4few and https://www.facebook.com/aso.resak.1 , CEPROCAF?: https://www.facebook.com/ceprocafe INTI: https://www.facebook.com/AsoInti

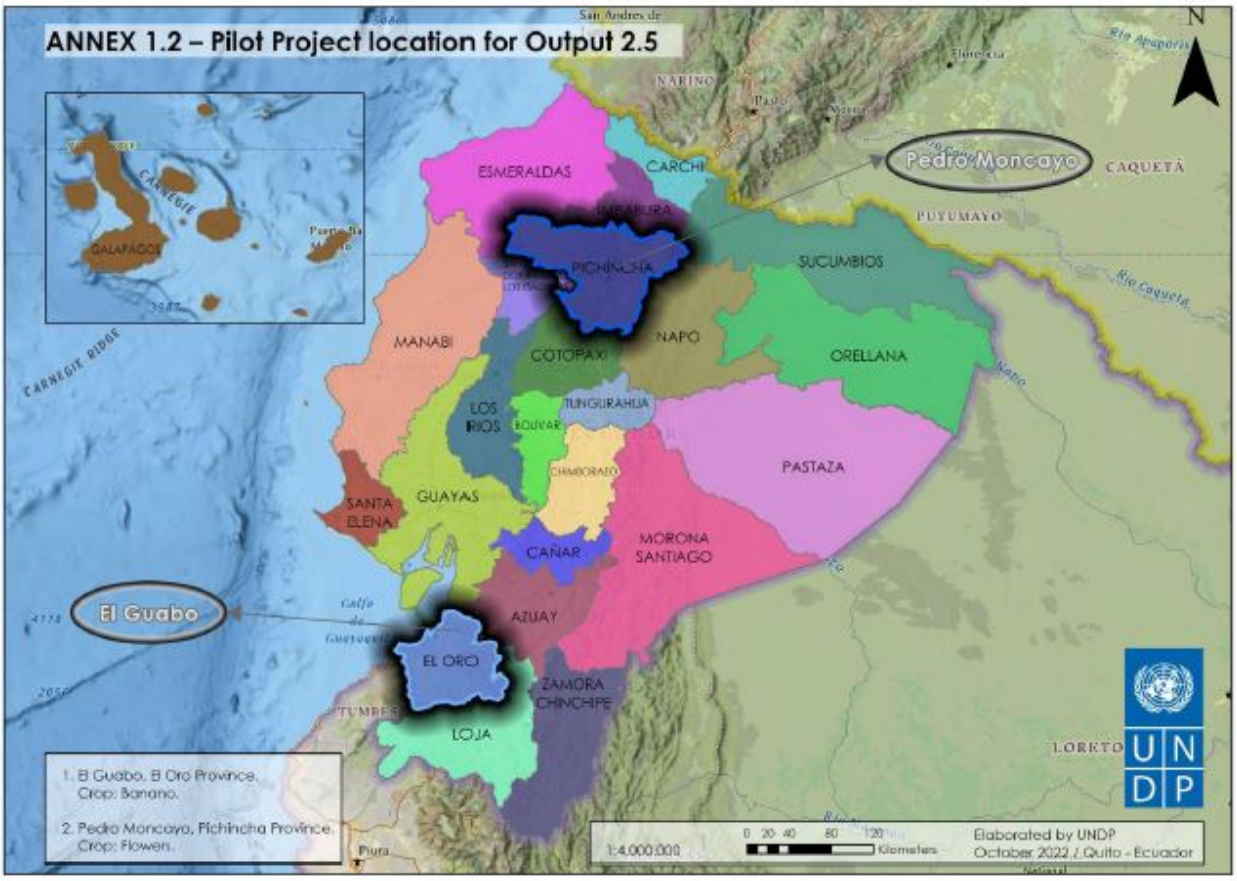
[18] The activity will consider coordination with the Community leader for water management (Juntas de Agua) to be established by the Decentralized Government Authorities (GADs) as management units that supports the formulation and implementation of basic projects.

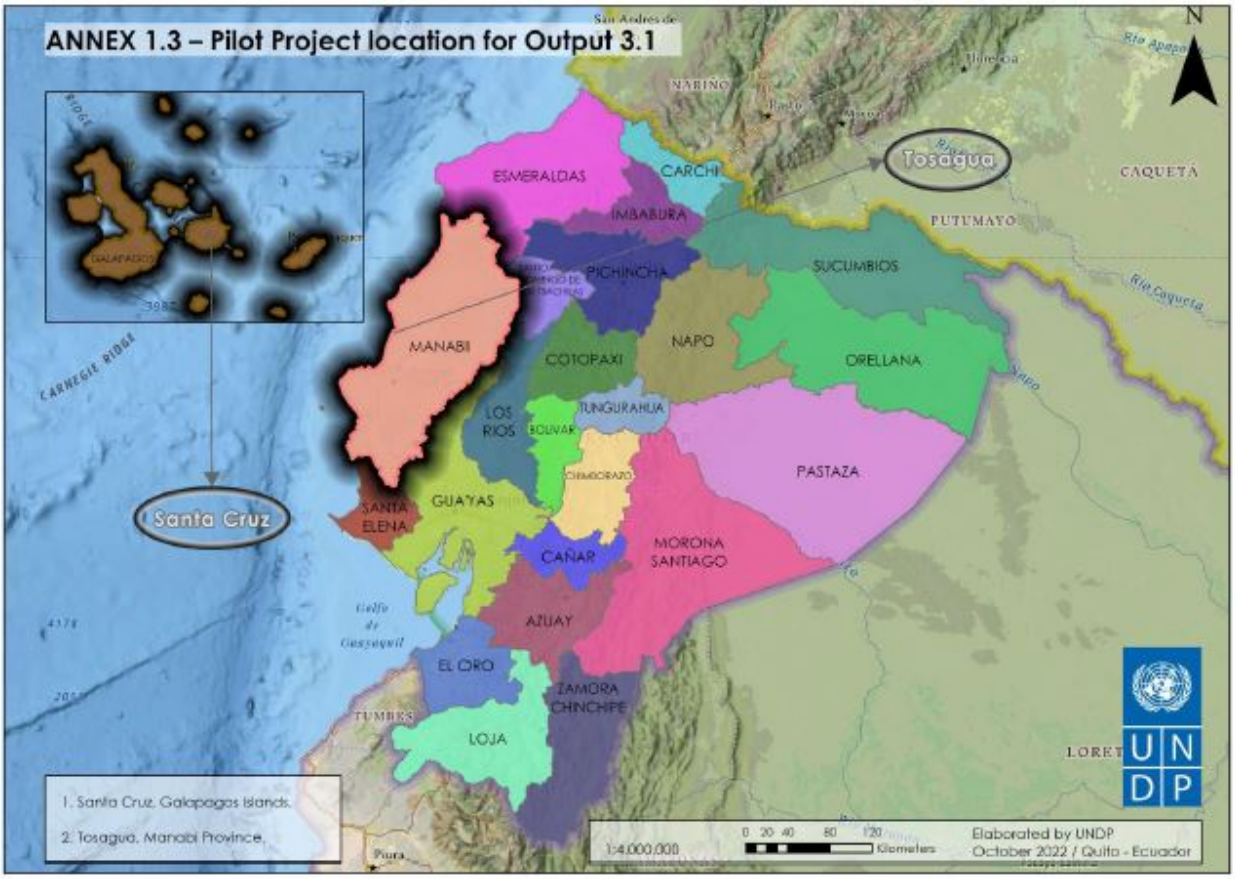
[19] FAO (2018) *World Food and Agriculture ? Statistical Pocketbook* https://doi.org/10.4060/CA1796EN

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.


ANNEX 1.1 – GEOGRAPHIC REGIONS OF ECUADOR
N
NARIÑO
Florencia
Pasto
Mocoa
CAQUETÁ
PUTUMAYO
Río Caquetá
Ibarra
Quito
Portoviejo
Quevedo
ECUADOR
Guayaquil
Cuenca
Machala
Tumbes
Loja
Piura
LORETO
Simbology
Amazon Region
Coast Region
Insular Region
Andes Region
Provincial Boundaries
1:4.000.000
0 20 40 80 120
Kilometers
Elaborated by UNDP
October 2022 / Quito - Ecuador


ANNEX 1.2 – Pilot Project location for Output 2.5
N
ESMERALDAS
CARCHI
IMBABURA
PICHINCHA
SUCUMBIOS
NAPO
ORELLANA
MANABI
COTOPAXI
TUNGURAHUA
LOS RIOS
BOLIVAR
CHIMBORAZO
PASTAZA
GUAYAS
SANTA ELENA
CAÑAR
MORONA SANTIAGO
AZUAY
EL ORO
ZAMORA CHINCHIPE
LOJA
TUMBES
Pedro Moncayo
CAQUETÁ
PUTUMAYO
El Guabo
GALAPAGOS
CARNEGIE RIDGE
LORETO
1. El Guabo, El Oro Province. Crop: Banana.
2. Pedro Moncayo, Pichincha Province. Crop: Flowers.
1:4.000.000
0 20 40 80 120
Kilometers
Elaborated by UNDP
October 2022 / Quito - Ecuador
UNDP



1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

The integrated approach proposed for the Ecuador Child Project fully responds to and reflects the FARM Programme?s ToC as can be deducted from the child project?s results framework, around the following components:
- Enabling conditions for the sound management of chemicals & waste through policy and enforcement (Component 1 ? Policy and Enforcement)
- Establishing sustainable resources for the transition to low/no-chemical agriculture through finance and investment (Component 2 ? Finance and investment)
- Building capacity and making knowledge accessible through the sound management of chemicals and waste (SMCW) (Component 3 ? Capacity and knowledge)

All Ecuador?s project components fully align with the programme components, and the child project outputs directly contribute to the PFD and child project outcomes as described in the project?s results framework (Section V of the ProDoc).

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities

Private Sector Entities Yes

If none of the above, please explain why:

During the PPG phase, a Stakeholder Analysis and Stakeholder Engagement Plan, detailed in Annex 8, was conducted in order to identify key stakeholders and relevant beneficiaries to be involved in project implementation process.

The ?*Stakeholder Engagement Plan*? seeks to strengthen UNDP institutional partner capacities for managing social and environmental risks and ensuring full and effective stakeholder engagement, including appropriate mechanisms to respond to complaints from project-affected people. This Plan follows the Guidance Note UNDP Social and Environmental Standards (SES).

The Annex lists in detail different stakeholders that have been identified to be strongly linked to and interested in the activities within the scope of the project. During PPG several activities were conducted, detailed in Table 1 of Annex 8, for engaging the wide universe of stakeholders relevant to the expected results of this FSP, allowing not only to communicate project?s objectives and activities but also to identify their concerns and expectations.

As a result, a stakeholder engagement plan was developed. this plan describes the different activities and engagement strategies to be conducted during the implementation period through which the project aims to engage the key stakeholders, addressing their concerns and meet and/or manage their expectations and proposed means of communication to be used.

The grievances will be geared directly to the Ministry of Environment, Water and Ecological Transition (MAATE) through the institutional mechanisms by which people concerned with or potentially affected by the project can express their grievances to the Undersecretary of Environmental Quality. Ultimately, grievances and complaints can be lodged to the following address:

Address: Madrid, 1159 and Andaluc?a, Ministry of Environment, Water and Ecological Transition, First Floor. Quito Ecuador

Phone numbers: +5932-3987600

Postal Code: 170525

Please provide the Stakeholder Engagement Plan or equivalent assessment.

attached.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

This FSP needs to engage a variety of stakeholders not only from the public sector but also from the private sector in order to achieve the planed outputs and outcomes. The following table summarizes the actors that the project will need to involve and describes their responsibilities in project?s implementation as well as their contributions to addressing the development challenge:

Type	Group	Stakeholder	Role
Public Entities	National Government	Ministry of Environment, Water and Ecological Transition (MAATE)	Is the national authority for environmental policies and regulations. The Ministry hosts GEF Operational Focal Point and is focal point for Stockholm, Minamata, Basel and Rotterdam Conventions and leads their implementation. Is responsible for the control of the proper sound management and disposal of agrochemicals and plastics for agricultural use waste. The MAATE is member of the National Pesticide Committee where reviews the files to approve the registration of pesticides for agricultural use (PQUA) in the eco-toxicological field (physical and chemical properties, uses, safety measures, environmental prevention, etc.) The MAATE is the implementing partner of the project, through its Undersecretary of Environmental Quality, it is responsible for the design, coordination, and implementation of the project and as such is part of the Steering Committee of the project.

		Ministry of Agriculture and Livestock (MAG)	Lead institution for the agricultural sector, promotes productivity and agricultural public policies, with emphasis on small, medium, and family farming, contributing to food sovereignty. Offer to producer?s assistance and technological solutions (agrochemicals, fertilizers, seeds) to guarantee high productivity and profitability in their crops. The MAG is beneficiary of the project and will: Contribute to the fulfillment of the activities within component 1 of the project. Support the implementation of activities under Output 2.4. Disseminate information and participate in raise awareness education programs regarding POPs/HHP and plastic waste. (GAP, financing options, alternatives to HHP, management and disposal of related waste including plastic)

		Phytosanitary and Zoosanitary Regulation and Control Agency (AGROCALIDAD)	AGROCLAIDAD is the agency attached to the MAG which is in charge of the control and regulation for the protection and improvement of animal health, plant health and food safety. It Is member of the National Pesticide Committee where reviews the files to approve the registration of pesticides for agricultural use (PQUA) in the agronomic field (efficacy tests, physical and chemical properties, uses, safety measures, etc). AGROCALIDAD will: Contribute to the fulfillment of the activities within component 1 of the project. Support the implementation of activities under Output 2.4, 3.1 and 3.3. Disseminate information and participate in raise awareness education programs regarding POPs/HHP and plastic waste. (GAP, financing options, alternatives to HHP, management and disposal of related waste including plastic)
		Ministry of Public Health (MSP)	Lead institution for the health sector, promotes the stewardship, regulation, planning, coordination, control, and management of Public Health. The MSP will be directly involved in activities under Component 1 and Output 2.5. It will provide reliable information on POPs and HHP stocks within health sector

		National Agency for Control, Regulation and Sanitary Observation (ARCSA)	ARCSA is the agency attached to the MSP which is responsible for the regulation, monitoring, and control of the population health, through risk management of products for human use and consumption. It is member of the National Pesticide Committee where reviews the files to approve the registration of pesticides for agricultural use (PQUA) in the toxicological field (physical and chemical properties, uses, safety measures, effects on humans and animals, etc.) ARCSA will be directly involved in activities under Component 1.
		National Customs Service Ecuador (SENAE)	Responsible for the control of foreign trade that promotes fair competition in economic sectors, grants import permits for all merchandises that enter to the country, including pesticides and other supplies for agricultural and livestock use. SENAE will be mainly involved in activities under Component 1.
	Other Public Institutions	Agency for the Regulation and Control of Biosafety and Quarantine for Galapagos (ABG)	Responsible of controlling, regulating, preventing, and reducing the risk of introduction, movement, and dispersion of exotic organisms, that endanger human health and the conservation of insular marine ecosystems and the biodiversity of Galapagos. Additionally, it controls and concedes authorization for the pesticide stores, monitors the producers of the islands and records pesticides quantities that enter and leave the islands. ABG will support the overall implementation of project activities within the territory of Galapagos Island. In particular, will support the implementation of Output 3.1 in Santa Cruz.

		Rural Social Security (SSC)	It is a special compulsory universal insurance regime of the Ecuadorian Institute of Social Security (IESS) that protects the population of the rural sector and the people dedicated to artisanal fishing in Ecuador. It is financed with the solidarity contribution of the insured persons and employers of the general social security system. The SSC will be involved in Output 2.4 and disseminate information and participate in raise awareness education programs regarding POPs/HHP and plastic waste. (GAP, financing options, alternatives to HHP, management and disposal of related waste including plastic)
	Public research and analytical institutions	National Institute of Agricultural Research (INIAP)	Is a public research institute attached to the MAG, which primary purposes are to promote scientific research, generation, innovation, validation, and dissemination of technologies in the agricultural and forestry production sector. INIAP executes its research, development, and technological innovation processes at a territorial level in 7 Experimental Stations, distributed in agroecological zones at a national level. It also has 6 Experimental Farms, 13 Technological Development Units (UDT) and an Automated Seed production greenhouse. The INIAP will: i) Participate in the development of the National Reduction Plan under Output 1.3 and In the participatory research and action in agroecology under Output 3.1 ii) Disseminate information and participate in raise awareness education programs regarding POPs/HHP and plastic waste. iii) Share research and technological advances.

	Local Government	Consortium of Provincial Autonomous Governments of Ecuador (CONGOPE)	It is an institution that supports the transformation and continuous improvement of the capacities of the Provincial Governments of Ecuador to strengthen the development processes of the provinces and exercise their autonomy through the design of specialized programs for management and comprehensive territorial development, governance, government for results, management of competences and generation of information. Strengthen the capacities of the technical teams of the Provincial Autonomous Governments in the competence of provincial environmental management, through the implementation of value-generating tools that promote efficient and participatory action at the local level. Due to its articulation capacity at regional level, the CONGOPE will contribute to the coordination and divulgation of the activities to be developed in different provinces within the territory. In particular: Support the implementation of activities under Output 1.2, 1.3, 2.5 and 3.1. Disseminate information and participate in raise awareness education programs regarding POPs/HHP and plastic waste. (GAP, financing options, alternatives to HHP, management and disposal of related waste including plastic)

		Association of Ecuadorian Municipalities (AME)	The AME is an associative instance of municipal and metropolitan decentralized autonomous governments (GADs) that promotes the construction of a decentralized and autonomous local management model, based on articulated planning and participatory management of the territory, through the exercise of institutional representation, quality technical assistance and coordination with other levels of government and state agencies. Due to its articulation capacity at local level, the AME will contribute to the coordination and divulgation of the activities to be developed in different municipalities within the territory.
International Organizations	Cooperation Agencies	United Nations Development Programme (UNDP)	UNDP is accountable to the GEF for the implementation of this project. This includes oversight of project execution to ensure that the project is carried out in accordance with agreed standards and provisions. UNDP is responsible for delivering GEF project cycle management services, and for the Project Assurance role of the Project Board/Steering Committee. UNDP and its Ecuador Country Office have extensive experience working with the private sector, governmental institutions, and civil society.
		United Nations Environment Programme (UNEP)	UNEP is the lead implementing agency for the Global Programme as well as several child concepts, including a Global Project for Coordination, Knowledge Management and Common Finance Tools.
		Food and Agricultural Organization of the United Nations (FAO)	Agency of the United Nations that leads international efforts to defeat hunger. FAO supports governments and partners to design the right policies and programs to end hunger, promote food security and make sure that people have regular access to enough high-quality food to lead active, healthy lives.

	Development Organization	Heifer International- Heifer Ecuador	Heifer International is a global nonprofit organization working to eradicate poverty and hunger through values-based, sustainable, comprehensive community development. Heifer Ecuador works with families in the rural sector of the country to eradicate hunger and poverty together, caring for the Earth and supporting enterprises that generate autonomy by focusing on women and youth, with articulating elements of organizational processes and Food Sovereignty.
		German Society for International Cooperation (GIZ) - GIZ Ecuador	GIZ Ecuador, in the field of environment and natural resources, works towards conserving biodiversity, forests, and sources of water by bringing together local governments, research institutions and civil society. It also promotes joint research projects between Ecuadorian and German universities. Furthermore, GIZ supports national strategies to protect the environment and to fight climate change. Moreover, the projects support small farmers in using good agricultural practices which result in more sustainable supply chains and help to conserve the ecosystems.

Financing Entities	Public Bank	BANECUADOR	BANECUADOR is a public development bank that promotes the production, inclusion, associativity, and improvement of the quality of life of micro, small and medium entrepreneurs, mainly in agribusiness, trade and services of the rural and popular urban sectors, with products innovative, efficient and sustainable financial. Its priority attention groups are: individual, women (Super Mujer Rural Credit) and family productive units; associative productive units; communal production units; small and medium-sized production, trade and/or service companies and entrepreneurs. It also offers a financial education program in order to strengthen the capacity of their clients to develop bankable projects. BANECUADOR will mainly support activities under Component 2, specifically Output 2.3.
		National Financial Corporation (CFN)	CFN is a public development bank that offers a National Guarantee Fund (NGF). It facilitates access to credit for micro, small and medium-sized entrepreneurs who do not have adequate guarantees to support an operation in the financial system that develops all kinds of economic activities. It is also a second-Floor banking as a vehicle to encourage development through credit lines to private financial institutions to expand geographical coverage and provide access to financing to MSMEs. CFN will mainly support activities under Component 2, specifically Output 2.3.

	Private Banks	National Corporation of Popular and Solidarity Finance (CONAFIPS)	CONAFIPS is a public institution that operates as a second-floor banking, that is, it finances credit operations that various private financial entities channel towards entrepreneurs in the popular and solidarity economy. It works through the organizations of the popular and solidarity financial sector (OSFPS) which are: savings and credit cooperatives, mutual societies, savings banks, and communal banks. It also offers a line of financial and non-financial products and services that include credits, guarantee services, strengthening and technology transfer to the OSFPS, in order to strengthen their capacity to generate credits for their members. CONAFIPS will mainly support activities under Component 2, specifically Output 2.3.
Civil Society Organizations	Industrial Associations	Crop Protection and Animal Health Industry Association (APCSA)	Is a nonprofit organization (33 partners), aiming to improve the competitiveness of the Ecuadorian agriculture-sector. Promotes sustainable agriculture, through good agricultural practices. Its objective is to: i) effectively represent its members before government institutions and the community; ii) Provide technical, statistical, and toxicological information; as well as educate and train the users of the products; iii) Establish programs for the benefit of the environment and health of farmers; and iv) Educate to protect the health of farmers and the environment. APCSA will be a strategic partner for the implementation of activities under Output 1.2, Output 2.4 and Output 2.5. Additionally support the activities of dissemination and raising awareness.

		Chamber Of Industry for Innovation and Agricultural Technology (INNOVAGRO)	Is the chamber of the agricultural innovation and technology industry that represents multinational companies in research and development of agrochemicals, agricultural biotechnology, and seeds. We represent Arysta, Bayer, Basf, Coterva, FMC, Sumitomo, SummitAgro, Stockton Group, Trichodex and Syngenta. INNOVAGRO represents the biggest 9 agricultural inputs importers in the country. INNOVAGRO will be a strategic partner for the implementation of activities under Output 1.2, Output 2.4 and Output 2.5. Additionally support the activities of dissemination and raising awareness.
		Association of Chemical Producers of Ecuador (APROQUE)	APROQUE is the Association of Chemical Producers of Ecuador whose main objective is to promote the process and sustainable development of the chemical industry, offering training and technical advice to its members under the principles of Responsible Care. APROQUE will be a strategic partner for the implementation of activities under Output 1.2, Output 2.4 and Output 2.5. Additionally support the activities of dissemination and raising awareness.
	Crop Producers Associations	Considering the project scope, this group is made of: Association of Small Banana Producers El Guabo (ASOGUABO) Cooperative of Agricultural Potato Producers (CONPAPA CHIMBORAZO) Association Of Agricultural and Livestock Producers La Esperanza de Urdaneta (ASOESPUR)	National associations that bring together producers of different crops in the country. These associations will: Support the implementation of pilot projects under Output 2.5 and Output 3.1. Support the implementation of GAP under the application of financial mechanisms. Participate in raising awareness, knowledge dissemination, training, and communications activities within the scope of the project.

	Exporters Producers Associations	Considering the project scope, this group is made of: National Association of Producers and Exporters of Flowers of Ecuador (EXPOFLORES) National Association of Cocoa Exporters (ANECACAO) Association of Banana Exporters of Ecuador (AEBE)	National Associations of Producers and Exporters of flower, banana, and cocoa for supporting the sector through union representation and offering of services to deliver added value of their products to their destinations. Support the implementation of pilot projects under Output 2.5 and Output 3.1. Support the implementation of GAP under the application of financial mechanisms. Participate in raising awareness, knowledge dissemination, training, and communications activities within the scope of the project.
Private Companies	Agrochemical Companies	Considering the project scope, this group is made of: ? BASF ? Equaquimica ? Farmagro ? AGRIPAC ? Bayer ? Inmonte ? Adama Andina ? Dupocsa ? Interoc ? Solagro ? Summit Agro ? Incoagro	Companies dedicated to the import, sales, and distribution of phytosanitary supplies, seeds, and equipment for agricultural production. Agrochemical companies will be involved in activities under Output 1.2, Output 2.4 and Output 2.5. Additionally support the activities of dissemination and raising awareness
	Waste and Management Disposal Companies	Considering the project scope, this group is made of: ? GM ? Incinerox ? Ecuambiente	These companies are licensed to perform treatment and disposal management activities of hazardous waste within the scope of the project (POPs pesticides/HHP pesticides and plastics of agricultural use). Consequently, these companies will: Participate in the execution of activities under Output 2.5. Provide technical capacity for treatment and disposal of hazardous wastes (pesticides and plastics for agricultural use).

Academy	Universities	Considering the project scope, this group is made of: ? Higher Polytechnic School of Litoral (ESPOL) ? Agricultural University of Ecuador (UAGRARIA) ? Central University of Ecuador (UCE) ? Higher Polytechnic School of Chimborazo (ESPOCH) ? Technical University of Machala (UTMACH) ? University Of San Francisco de Quito (USFQ)	Education institutions, whose substantive axes are teaching, research and connection with the community; as well as ethical, supportive, honest professional performance and permanent social and environment responsibility. Universities will: iv) Participate in the development of the National Reduction Plan under Output 1.3 and In the participatory research and action in agroecology under Output 3.1 v) Disseminate information and participate in raise awareness education programs regarding POPs/HHP and plastic waste. vi) Share research and technological advances. According to the project coverage, especially regarding the selected locations to develop the demonstration projects, other relevant academic institutions will be further engaged in the project development.
Beneficieries		Small-Medium Farmers	This sector is of great relevance within the scope of the project. Consequently, the activities to be implemented will have a positive impact on their standard of living, their health, and the environment. Farmers will be a key stakeholder throughout the lifecycle of the project. They will participate in raising awareness, knowledge dissemination, training, and communications activities within the scope of the project. They will be mainly involved in activities under Component 2 and Component 3.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor;

Co-financier; Yes

Member of project steering committee or equivalent decision-making body;

Executor or co-executor;

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

During the PPG phase a gender analysis was conducted, and a gender action plan was developed for addressing gender equality in project outcomes. The Annex 10 ?Gender Analysis and Action Plan? includes the detail of this work, but it can be highlighted that main objective of this plan is to ensure that gender considerations are integrated into all actions promoted by the project "Financing Agrochemicals Management and Reduction in Ecuador? promoting the equal and fair participation of women and men in the design of innovative alternatives, benefits, and opportunities in each of its components. Likewise, the following specific targets were established:
a) Raise awareness of the gender approach concepts to achieve sustainable and inclusive development in the reduction and management of hazardous agrochemicals and waste (including plastics for agricultural use).
b) Promote actions in the project that protect the health of men and women, taking into account gender-differentiated exposure to agrochemicals and their residues.
c) Improve spaces for participation and empowerment of women as agents of change to ensure that the agricultural sector is free of hazardous agrochemicals.
d) Generate information disaggregated by sex that will serve as the basis for strengthening the monitoring, communication and evaluation mechanisms of the project on the reduction and management of hazardous agrochemicals and waste.
The gender plan includes a strategy for mainstreaming a gender approach in the environmentally sound management of harmful chemicals and plastic waste in agricultural sector, which guides this process in all actions to be developed by the project, and in addition to the activities proposed for each component will ensure that gender considerations are taken into account for the complete framework of results.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes
Closing gender gaps in access to and control over natural resources; Yes

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

Does the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

The project has a significant number of private sector partners (please, refer also to Section 2 ?Stakeholders?). A good sign of private sector engagement in the project?s implementation is that 21.4% of the project?s co-financing (USD5,752,055) is being provided by the private sector; as such it can be concluded that Private Sector Engagement for this project is substantial.

The involvement of the private sector in the project will be: a) Regulatory, enforcement and awareness raising activities supported by the project will have as one of the main target the private sector as they are one of the key stakeholders within the agrochemical value chain for the reduction of harmful agorchemicals use, the availability of alternatives, and the management of related waste (including the plastics for agricultural use under ERP systems); b) Capacities strengthened for the development of financial mechanisms suitable for farmers who adopt sustainable agricultural practices since they can support and ecourage farmers for the transition to a low/non chemical agricultural production; c) Environmental management of agri pastics waste and strengthen their capacities as their key role in EPR systems.

The private sector partners who are engaged in the project?s implementation can be grouped as follows:

Industrial associations:

INNOVAGRO

APCSA

APROQUE

Private sector and sectors to intervene:

National Corporation of Popular and Solidarity Finance (CONAFIPS)

Finance Institutions

Agrochemical Companies

Waste management and disposal companies

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

A group of risks has been identified and need to be considered during the execution of the project. As per standard UNDP requirements, the National Project Coordinator will monitor risks quarterly and report on the status of risks to the UNDP Country Office (CO) in Ecuador. The UNDP CO will record progress in the UNDP ATLAS risk log (UNDP Risk Register). Risks will be reported as critical when the impact and probability are HIGH (i.e. when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported to the GEF in the annual Project Implementation Report (PIR).

In Annex 6, UNDP Risk Register, the detailed analysis of risks that could threaten the achievement of project results can be found, including the social and environmental risks identified in the development of the SESP (Annex 5). The description of how the project risks will be mitigated is shown in Annex 6 (UNDP Risk Register) and in Annex 9 (ESMF).

The following table summarizes the key risks that could threaten the achievement of project results:

Risk Class	Risk and Description	Risk Management Response
Social and Environmental	**Risk 1:** Duty bearers, such as customs officials, inspectors and other government officials, may not have the capacity to meet their obligations in the Project	The project?s design has included targeted training to customs officers and inspectors and will address the needs of the participants (Outputs 1.1 and 1.4) and training for various other stakeholders. Training needs assessment will be undertaken (guided by the SES, as noted in the ProDoc), and a post-training assessment will be conducted to ensure that the information has been delivered to the participants as required and will have a meaningful impact on their job performance. In line with the Environmental and Social Management Framework (ESMF) that has been prepared for the Project, additional capacity building will be done as needed per the developed Environmental and Social Management Plans (ESMPs).

	Risk 2: Loss of income to small and medium sized farms due to banning of import or restricting the use of certain hazardous pesticides	In line with theh ESMF, a Strategic Environmental and and Social Asssessment (SESA) will be adopted druing preparation of the national plan for gradually reducing the use of harmful agrochemicals (Output 1.3), legal framework roadmap and all legal instruments to be supported/drafted (Activity 1.5-b) and the New Fiscal Incentives Assessment (Activity 2.2-b) to address the potential for loss of income for various groups. The project has also developed a Stakeholder Engagement Plan to engage relevant stakeholders, especially farmers and identifying win-win solutions aimed at reducing the need for pesticides and finding affordable and effective alternatives for the ones that will be phased out.
	Risk 3: Marginalization of vulnerable groups by not giving them the opportunity to participate in the project and benefiting from its outcomes	To ensure inclusive fiscal incentives (Activity 2.2-b) and access to credit (Output 2.3), the project has developed a Stakeholder Engagement Plan that ensures participation of all stakeholders in project activities. The plan will ensure effective engagement between various stakeholders by creating and disseminating information, fostering cooperation, and enhancing capacities. Stakeholders identified include representatives from central and local government, private sector, NGOs and civil society, academia and research institutions, vulnerable population groups and the general public. It will also put in place a project-level and/or site-level Grievance Redress Mechanism (GRM) to provide meaningful means for local communities and affected populations to raise concerns and/or grievances when activities may adversely impact them.
	Risk 4: Gender discrimination reproduced through limiting women?s ability to contribute to decision-making and to benefit from the project	A *Gender Action Plan* (Annex 10 of the ProDoc) has been prepared to mitigate the identified risk and propose measures that ensure that women are represented in decision-making on project activities and are included in capacity building activities. In addition, this risk will be further assessed in the SESAs that will be undertaken during project implementation as described in the ESMF.

	Risk 5: Accidental release of POPs pesticides and HHPs into the environment due to improper handling, storage, transport and treatment/disposal containers, exposing the workers, local communities and natural ecosystems.	In line with the ESMF that has been prepared for the project, a targeted assessment will be conducted for each of the pilot demonstrations (removing existing POPs/HHPs (Activity A2.5-a) and integrated management of agrochemical-related plastic waste (Activity 2.5-b)) on risks related to accidental spills and occupational health and safety. The assessment will identify environmentally sensitive receptors that may be affected by accidental releases such that mitigation measures will be developed and included in standalone ESMPs through a Pollution Prevention and Management Plan, Occupational Health and Safety Plan and Waste Management Plan. The ESMP will describe how the project will handle, transport and store hazardous material in accordance with IFC Health and Safety Guidelines.
	Risk 6: Pollution affecting sites of cultural heritage, biodiversity or socioeconomic value to the local community from grants funded by the Competitive Fund Mechanism.	The Competitive Fund Mechanism (Activity 2.6-a) will incorporate SES criteria during the selection process including assessment of sites of these activities. This will be clarified through an operational safeguards procedure for the Competitive Fund Mechanism, to be in place prior to launch of the mechanism. This will include a list of exclusion criteria to eliminate high risk sites and activities that could lead to economic or physical displacement. All proposed grant initiatives will undergo an environmental and social screening to determine the level of assessment/management needed, if any, per the operational safeguards procedure.
	Risk 7: Increase in consumption of water and natural resources	The farming methods to be recommended by the project and proposed management and treatment methods for agrochemical stockpiles will be evaluated and selected based on their potential use of resources. As part of the targeted assessments/ESMPs that will be undertaken for the pilot demonstrations on integrated management of agrochemical-related plastic waste (Activity 2.5-b)), this risk will be assessed and mitigation measures incorporated in the site-specific ESMPs. As for Output 3.1, where agroecological practices will be introduced, these practices will be assessed for their potential water consumption to ensure that efficient use of these resources is done.

	Risk 8: Flooding or other damage to interim storage facilities for stockpiles during the demonstration activities due to natural disasters	As part of the targeted assessment/ESMP that will be prepared for the pilot demonstration related to removing existing POPs/HHPs (Activity A2.5-a), the vulnerability of the storage facilities will be assessed and mitigation measures proposed to safeguard these facilities.
	Risk 9: Working conditions within project demonstration activities in contravention to principles and standards of ILO fundamental conventions	A Labour Management Procedure will be developed for the project to clarify the terms and conditions related to project labour. The targeted assessments for the pilot demonstrations (removing existing POPs/HHPs (Activity A2.5-a) and integrated management of agrochemical-related plastic waste (Activity 2.5-b and the resulting standalone ESMPs will include an Occupational Health and Safety Plan and relevant labour management measures to ensure SES compliance measures are in place prior to commencement of the works. Activities or initiatives that will be selected during, or after project implementation, such as increasing capacity to financial institutions to provide access to credit for farmers who use good practices (Output 2.3) will address this issue through the ESRA training, which will cover risks related to working conditions and occupational health and safety. As for the Competitive Fund Mechanism (Activity 2.6-a), a safeguards operational procedure will be developed prior to launch of the mechanism. This will include requiring an environmental and social screening process to inform design and selection of grant proposals and to determine the level of assessment/management measures, including working conditions.

Financial	**Risk 10:** Private stakeholders, mainly agrochemicals companies and private financing entities, are reluctant to play an active role during project execution.	During the PPG stage, the main concerns and interests of the key stakeholders for the project (mainly financial entities and industrial associations such as INNOVAGRO and APCSA) were compiled, allowing the formulation of activities aiming at the elimination of the identified set of barriers and emphasizing on the benefits of being part of the project. In addition, an effective communication strategy will be developed and implemented during project?s execution to raise awareness among the stakeholders and the community in general aware of the project's scope, activities, and benefits.
	Risk 11: Impacts due to fluctuations in credit rate, market and currency that may affect project total budget due to a stressful economic national context.	UNDP monitors expenditure on a daily basis. Further UNDP HQ provides global oversight of project delivery minimizing the risk of operational risk due to currency risks.
Operational	**Risk 12:** Limited capacity of national stakeholders to adopt sustainable agricultural practices as well as sound management of related wastes (including agri plastics)	During the implementation of the FSP, awareness-raising, training and technical training programs will be developed and implemented, as well as capacity building in national authorities, public officials and other interested parties who are related to agrochemicals and waste LCM to ensure the knowledge and experience needed to carry out their tasks properly.
	Risk 13: Deficiencies in communication and relationship with stakeholders.	During PPG phase main concerns and interests of the stakeholders interested in the project were compiled, allowing the formulation of actions that allow eliminating these barriers and emphasizing on the benefits of being part of the project. Within the Stakeholder Engagement Plan these activities are planned to continue during the project implementation. Furthermore, an effective communication strategy will be developed to raise awareness among the stakeholders and the community in general aware of the project's activities.
	Risk 14: Lack of interest at national and local level to actively participate in the development and implementation of project activities.	The PMU and the Project Steering Committee will provide continuous feedback and monitor the project results on a regular basis. Furthermore, consultations will be held with decision makers from other government organizations to communicate the relevance of their participation in the project

Organizational	**Risk 15:** Limited capacity in project monitoring.	The project foresees in its Component 4 a series of activities aimed at a periodic monitoring and follow-up on the development of the project and a comprehensive reporting during the MTR, where possible deviations from the programmed actions can be identified early, as well as compliance with the proposed objectives.
Strategic	**Risk 16:** Limited capacity in the Ministry of Environment, Water and Ecological Transition (MAATE) and other key stakeholders that can generate conflicts, misinformation, and misunderstandings of the overall objective of the project.	During the implementation of the FSP, technical training programs will be developed and implemented, as well as capacity building in national authorities, public officials and other interested parties who are working on issues related to the management of chemicals and hazardous waste, to ensure the knowledge and experience needed to carry out their tasks properly. Furthermore, an effective communication strategy and an awareness raising campaign will be developed during the implementation of the FSP to raise awareness among the stakeholders and the community in general of the project's scope and activities.
Safety and Security	**Risk 17:** Political instability might result in new management and technical appointees within entities that are project partner, requiring additional efforts to ensure timely project implementation.	In the situation that this would happen, technical personnel from UNDP CO staff and the UNDP Panama RTA will do their utmost to inform and convince new decision makers on the importance of the project, the reasons why it was developed and the positive impact it will have on human health and the environment in Ecuador.

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

Section 1: General roles and responsibilities in the projects? governance mechanism

Implementing Partner: The Implementing Partner for this project is the Ministry of Environment, Water and Ecological Transition (MAATE).

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full

responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The Implementing Partner is responsible for executing this project. Specific tasks include:

•Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
•Overseeing the management of project risks as included in this project document and new risks that may emerge during project implementation.
•Procurement of goods and services, including human resources.
•Financial management, including overseeing financial expenditures against project budgets.
•Approving and signing the multiyear workplan.
•Approving and signing the combined delivery report at the end of the year; and,
•Signing the financial report or the funding authorization and certificate of expenditures.

Responsible Parties: AGROCALIDAD. Specific tasks include:

? Support the reduction/avoidance of POPs/HHP in agriculture during the project?s life.

? Support the development, validation and dissemination of training and awareness raising materials.

? Support the training of farmers.

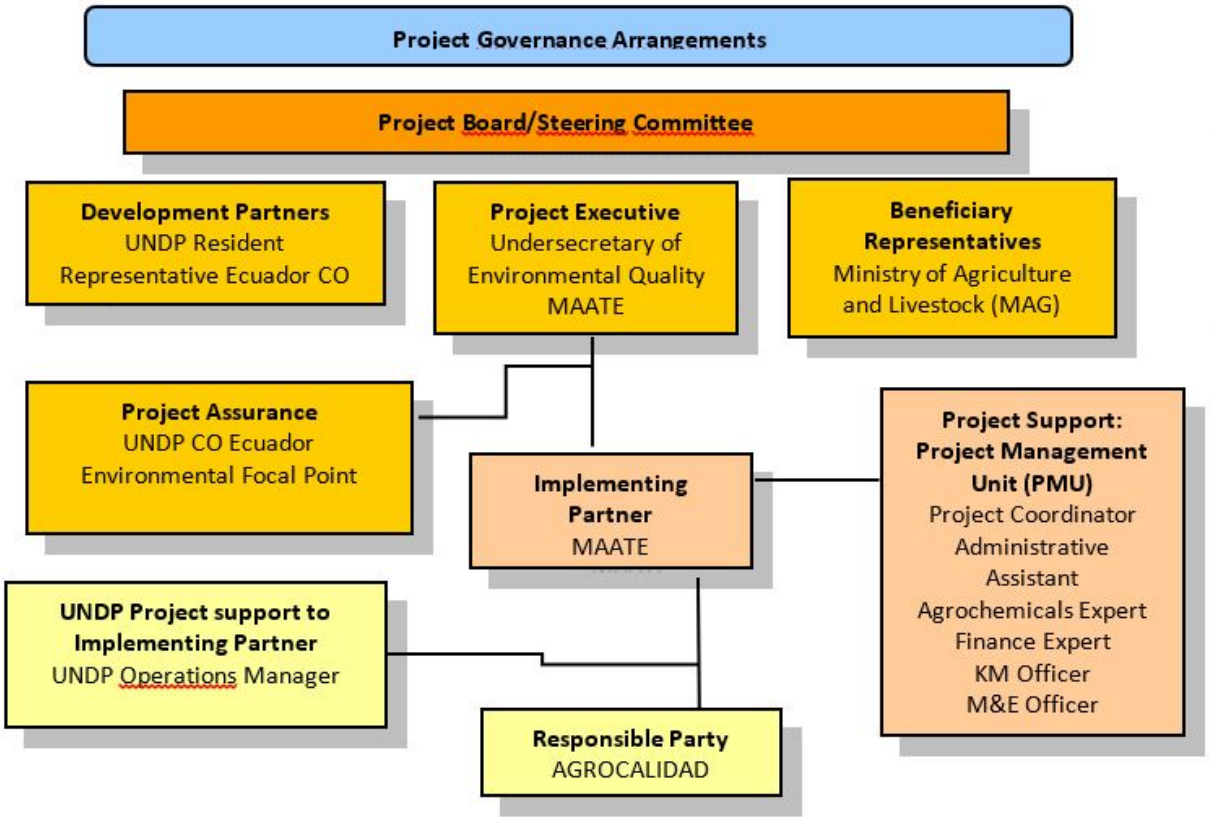
Project stakeholders and target groups: The stakeholders of the project correspond to a diversity of entities of the Government (at national and local level), private sector, financial entities, local stakeholders, academia and CSOs, as detailed in Table 10. Partnerships of the FSP, such as: universities, crops producer?s associations, agrochemical companies, public and private finance groups, research centers, etc. These stakeholders can engage having similar approach and goals for the reduction of harmful agrochemicals and promote a sustainable agriculture production, community health, sustainability, and financing.

UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes overseeing project execution undertaken by the Implementing Partner to ensure that the project is being carried out in accordance with UNDP and GEF policies and procedures and the standards and provisions outlined in the Delegation of Authority (DOA) letter for this project. **The NCE Executive Coordinator, in consultation with UNDP Bureaus and the Implementing Partner, retains the right to revoke the project DOA, suspend or cancel this GEF project.** UNDP is responsible for the Project Assurance function in the

project governance structure and presents to the Project Board and attends Project Board meetings as a non-voting member.

A firewall will be maintained between the delivery of project oversight and quality assurance performed by UNDP and charged to the GEF Fee and any support to project execution performed by UNDP (as requested by and agreed to by both the Implementing Partner and GEF) and may be charged to the GEF project management costs (only if approved by GEF). The segregation of functions and firewall provisions for UNDP in this case is described in the next section.

Section 2: Project governance structure



The UNDP Resident Representative assumes full responsibility and accountability for oversight and quality assurance of this Project and ensures its timely implementation in compliance with the GEF-specific requirements and UNDP?s Programme and Operations Policies and Procedures (POPP), its Financial Regulations and Rules and Internal Control Framework. A representative of the UNDP Country

Office will assume the assurance role and will present assurance findings to the Project Board, and therefore attends Project Board meetings as a non-voting member.

UNDP project support*:* The Implementing Partner and GEF OFP have requested UNDP to provide support services in the amount of USD$ 119,315 for the full duration of the project, and the GEF has agreed for UNDP to provide such execution support services and for the cost of these services to be charged to the project budget. The execution support services ? whether financed from the project budget or other sources - have been set out in detail and agreed between UNDP Country Office and the Implementing Partner in a Letter of Agreement (LOA). This LOA is attached to this Project Document.

To ensure the strict independence required by the GEF and in accordance with the UNDP Internal Control Framework, these execution services will be delivered independent from the GEF-specific oversight and quality assurance services.

Section 3: Segregation of duties and firewalls vis-?-vis UNDP representation on the project board:

As noted in the Minimum Fiduciary Standards for GEF Partner Agencies, in cases where a GEF Partner Agency (i.e. UNDP) carries out both implementation oversight and execution of a project, the GEF Partner Agency (i.e. UNDP) must separate its project implementation oversight and execution duties, and describe in the relevant project document a: 1) Satisfactory institutional arrangement for the separation of implementation oversight and executing functions in different departments of the GEF Partner Agency; and 2) Clear lines of responsibility, reporting and accountability within the GEF Partner Agency between the project implementation oversight and execution functions.

In this case, UNDP?s implementation oversight role in the project ? as represented in the project board and via the project assurance function ? is performed by the Ecuador CO RR on Project Board and the Environment Focal Point for project assurance. UNDP?s execution role in the project (as requested by the implementing partner and approved by the GEF) is performed by is performed by an Operations Manager, and other staff in the Operations unit, who will report to the Deputy Resident Representative.

Section 4: Roles and Responsiblities of the Project Organization Strucutre:

a) Project Board: All UNDP projects must be governed by a multi-stakeholder board or committee established to review performance based on monitoring and evaluation, and implementation issues to ensure quality delivery of results. The Project Board (also called the Project Steering Committee) is the most senior, dedicated oversight body for a project.

The two main (mandatory) roles of the project board are as follows:

1) **High-level oversight of the execution of the project by the Implementing Partner** (as explained in the ?Provide Oversight? section of the POPP). This is the primary function of the project board and includes annual (and as-needed) assessments of any major risks to the project, and decisions/agreements on any management actions or remedial measures to address them effectively. The Project Board reviews evidence of project performance based on monitoring, evaluation and reporting, including progress reports, evaluations, risk logs and the combined delivery report. The Project Board is responsible for taking corrective action as needed to ensure the project achieves the desired results.

2) **Approval of strategic project execution decisions of the Implementing Partner** with a view to assess and manage risks, monitor and ensure the overall achievement of projected results and impacts and ensure long term sustainability of project execution decisions of the Implementing Partner (as explained in the ?Manage Change? section of the POPP).

Requirements to serve on the Project Board:

? Agree to the Terms of Reference of the Board and the rules on protocols, quorum and minuting.

? Meet annually; at least once.

? Disclose any conflict of interest in performing the functions of a Project Board member and take all measures to avoid any real or perceived conflicts of interest. This disclosure must be documented and kept on record by UNDP.

? Discharge the functions of the Project Board in accordance with UNDP policies and procedures.

? Ensure highest levels of transparency and ensure Project Board meeting minutes are recorded and shared with project stakeholders.

Responsibilities of the Project Board:

? Consensus decision making:

o The project board provides overall guidance and direction to the project, ensuring it remains within any specified constraints, and providing overall oversight of the project implementation.

o Review project performance based on monitoring, evaluation and reporting, including progress reports, risk logs and the combined delivery report;

o The project board is responsible for making management decisions by consensus.

o In order to ensure UNDP?s ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.

o In case consensus cannot be reached within the Board, the UNDP representative on the board will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

? Oversee project execution:

o Agree on project manager?s tolerances as required, within the parameters outlined in the project document, and provide direction and advice for exceptional situations when the project manager?s tolerances are exceeded.

o Appraise annual work plans prepared by the Implementing Partner for the Project; review combined delivery reports prior to certification by the implementing partner.

o Address any high-level project issues as raised by the project manager and project assurance;

o Advise on major and minor amendments to the project within the parameters set by UNDP and the donor and refer such proposed major and minor amendments to the UNDP BPPS Nature, Climate and Energy Executive Coordinator (and the GEF, as required by GEF policies);

o Provide high-level direction and recommendations to the project management unit to ensure that the agreed deliverables are produced satisfactorily and according to plans.

o Track and monitor co-financed activities and realisation of co-financing amounts of this project.

o Approve the Inception Report, GEF annual project implementation reports, mid-term review and terminal evaluation reports.

o Ensure commitment of human resources to support project implementation, arbitrating any issues within the project.

? Risk Management:

o Provide guidance on evolving or materialized project risks and agree on possible mitigation and management actions to address specific risks.

o Review and update the project risk register and associated management plans based on the information prepared by the Implementing Partner. This includes risks related that can be directly managed by this project, as well as contextual risks that may affect project delivery or continued UNDP compliance and reputation but are outside of the control of the project. For example, social and environmental risks associated with co-financed activities or activities taking place in the project?s area of influence that have implications for the project.

o Address project-level grievances.

? Coordination:

o Ensure coordination between various donor and government-funded projects and programmes.

o Ensure coordination with various government agencies and their participation in project activities.

Composition of the Project Board: The composition of the Project Board must include individuals assigned to the following three roles:

1. **Project Executive:** This is an individual who represents ownership of the project and chairs (or co-chairs) the Project Board. The Executive usually is the senior national counterpart for nationally implemented projects (typically from the same entity as the Implementing Partner), and it must be UNDP for projects that are direct implementation (DIM). In exceptional cases, two individuals from different entities can co-share this role and/or co-chair the Project Board. If the project executive co-chairs the project board with representatives of another category, it typically does so with a development partner representative. The Project Executive is: **Undersecretary of Environmental Quality***,* Ministry of Environment, Water and Ecological Transition (MAATE)
2. **Beneficiary Representative(s):** Individuals or groups representing the interests of those groups of stakeholders who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often representatives from civil society, industry associations, or other government entities benefiting from the project can fulfil this role. There can be multiple beneficiary representatives in a Project Board. The Beneficiary representative (s) is/are: Ministry of Agriculture and Livestock (MAG)
3. **Development Partner(s):** Individuals or groups representing the interests of the parties concerned that provide funding, strategic guidance and/or technical expertise to the project. The Development Partner(s) is/are: UNDP Ecuador Country Office Resident Representative.

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b) **Project Assurance:** Project assurance is the responsibility of each project board member; however, UNDP has a distinct assurance role for all UNDP projects in carrying out objective and independent project oversight and monitoring functions. UNDP performs quality assurance and supports the Project Board (and Project Management Unit) by carrying out objective and independent project oversight and monitoring functions, including compliance with the risk management and social and environmental standards of UNDP. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. Project assurance is totally independent of project execution.

A designated representative of UNDP playing the project assurance role is expected to attend all board meetings and support board processes as a non-voting representative. It should be noted that while in certain cases UNDP?s project assurance role across the project may encompass activities happening at several levels (e.g. global, regional), at least one UNDP representative playing that function must, as part of their duties, specifically attend board meeting and provide board members with the required documentation required to perform their duties. The UNDP representative playing the main project assurance function is/are: Programme Officer, NOB (National Professional Officer-B)

c) **Project Management ? Execution of the Project:** The Project Manager (PM) (also called project coordinator) is the senior most representative of the Project Management Unit (PMU) and is responsible for the overall day-to-day management of the project on behalf of the Implementing Partner, including the mobilization of all project inputs, supervision over project staff, responsible parties, consultants and sub-contractors. The project manager typically presents key deliverables and documents to the board for their review and approval, including progress reports, annual work plans, adjustments to tolerance levels and risk registers.

A designated representative of the PMU is expected to attend all board meetings and support board processes as a non-voting representative. The primary PMU representative attending board meetings is: Project Manager/Coordinator

Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

In Ecuador there is a group of GEF-financed projects and other initiatives currently under implementation related to the development challenge that this project is also addressing, which could provide some additional support to strengthening this institutional partnership approach. Thanks to the involvement of the institutional partners in some of them, it seems of mutual benefit the achievement of the outcomes of this project. Specifically, this FSP will ensure coordination and count on the capacity built and knowledge gathered from the concurrent projects that are already in progress, as shown in table below:

Project	Agency	Main relevance for this FSP
National Programme for the Environmental Sound Management and Live Cycle Management of Chemical Substances. (PNGQ)	GEF - UNDP	The objective of the project is to protect human health and the global environment from the impact of harmful chemicals, in particular Persistent Organic Pollutants (POPs) and mercury (Hg). The project aims to achieve a reduction in the use and release[1] of such chemicals by: Strengthening national institutional capacity and the regulatory and policy framework for the Sound Management of Chemicals (SMC) founded upon a Life-Cycle Approach, by training 706 people (212 female and 494 male); building capacity of 12 private and public institutions and revising/developing 16 policies, regulations and standards. Eliminating obsolete (POPs) pesticide stockpiles (by 30 tonnes), increasing the sound disposal of empty pesticide containers by 90 tonnes; reducing the use of new POPs contained in products (by 30 tonnes); and, reducing the release of unintentionally produced POPs (by 25 g-TEQ/yr). Reducing the use and releases of mercury from Artisanal and Small-Scale Gold Mining (ASGM) at a non-industrial level (by a total of 2 tonnes), and products containing mercury (by 35 ky/yr). Raising awareness of 11,778 people (3,533 female and 8,245 male) on the sound management of chemicals in their Life-Cycle Management, ensuring project monitoring and disseminating project results and experiences.

The Biodiversity Finance Initiative (BIOFIN)	UNDP	The BIOFIN initiative is a global program which offers support to countries to direct dialogue on national policies and instrument the mobilization of resources towards financing gaps for biodiversity conservation. In Ecuador UNDP supports the fulfillment of national priorities on biodiversity issues, conservation, and climate change, in a framework of inclusive economic development and poverty reduction.
Agtech for inclusion and sustainability: SP Ventures Regional Fund (AGVENTURES II)	GEF - IADB	Support the consolidation and scaling up of innovative Agtech early-stage companies (SMEs) that will develop technologies to offer productivity, market, and environmental solutions for the agricultural sector in Latin America especially to the Small and Medium Sized Farmers to generate environmental benefits related to climate change, land degradation, and chemicals and waste.
PROAMAZONIA	GEF-GCF-UNDP	This project promotes sustainable development within the Amazon. It is an initiative led by the Ministry of Environment and Water (MAATE) and the Ministry of Agriculture and Livestock (MAG) with support from the UNDP. This national government programme links national efforts to reduce deforestation with the priority agendas and policies of the country?s economic sectors. It also promotes sustainable and integrated management of natural resources by contributing to poverty eradication and sustainable human development. PROAmazon?a strengthens Ecuador?s positioning as a country committed to global efforts to combat climate change, the 2030 Agenda and the Sustainable Development Goals (SDGs).
Support for the Strengthening of Public Agricultural Services in Ecuador	Interamerican Development Bank IDB	Support the strengthening of public agricultural services in Ecuador. The specific objectives are: i) to prepare diagnostic studies and formulate a strengthening proposal for the services provided by Agrocalidad; and ii) analyze aspects of the institutional framework of the National Institute of Agricultural Research (INIAP) that allow a proposal to be made to improve the services provided.
Green Finance & Sustainable Agriculture in the dry forest ecoregion of Ecuador and Peru	GEF CAF, COFIDE, BANECUADOR, FAO, CONSERVATION INTERNATIONAL	Support the conservation of biodiversity in prioritized territories of the Dry Forests in Ecuador and Peru, by financing sustainable agricultural practices (which includes climate smart agriculture), building capacities and transferring technology to small and medium farmers. The financing of sustainable agriculture practices at adequate financial terms and conditions is to be enabled through the issuance of one or more green bonds in Peru and Ecuador that will benefit from guarantees provided by GEF and CAF. The guarantees will act as credit enhancements thereby improving the terms of financing of the issuers, and their on-lending terms for the small holder farmers in that region.

Small Grants Programme	GEF-UNDP	The Small Grants Program (SGP/GEF/UNDP), with 30 years of management in Ecuador and the world, promotes community initiatives that preserve biodiversity and agrobiodiversity. During Operational Phase 7, it worked with several bio enterprises, highlighting their commitment to the care of the rainforest, mangrove and paramo, some of them are: Association of Producers and Traders of Agricultural Products INTI, in the province of Napo, highlighting the production and commerce of Amazonian Ashangas, products of organic origin with high nutritional value and pleasant taste. In the province of Pichincha, there is the Regional Association of Food Sovereignty of the Kayambi Territory -RESAK, which provides healthy products that in turn contribute to reducing the use of chemical inputs that represent a danger to the deterioration of natural resources. In the province of Manab?, CEPROCAF? is an organization that since Operational Phase 5 has promoted the production and commercialization of coffee. Promoting the social inclusion of young people, diversifying crops on farms, maintaining the tradition of coffee under shade and without the use of chemical pesticides.

[1] **Emission**: Emanation of chemical substance towards atmosphere; **Release**: Emanation of chemical substance towards water and soil. In this Project document, the term ?**release**? will be used to indicate **emanation of a chemical substance to atmosphere, water and soil**.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

This Project is aligned and consistency with the following National Priorities:

a) National Development Plan ?Opportunity Creation Plan 2021-2025?[1]. In particular the project will contribute to the Objective 11 under the goal of ecological transition which aims to ?Conserve, restore, protect and make sustainable use of natural resources? proposing to advance in the necessary legal, economic and environmental protection conditions to achieve the development of human activities within the framework of the ecological transition, through the programming of actions that allow the conservation of habitats, the efficient management of natural resources and repair of ecosystems.

b) National Implementation Plan (NIP) under Stockholm Convention on Persistent Organic Pollutants (POPs).

c) UNSDCF 2022-2026 Effect 2: ?In 2026, the State and society advance towards the ecological transition and towards a sustainable and inclusive economy, decarbonised and resilient to the effects of climate change, conserving biodiversity, avoiding land degradation and the contamination of ecosystems, with a gender, inclusion and diversity approach?. Additionally, this FSP is aligned with UNDP Strategic Plan Output 2.1: instruments and mechanisms are applied at national or sub-national level to manage natural resources in a sustainable way to mainstream climate change adaptation and mitigation and their effects, and to transition towards more sustainable productive system; and Output 2.2: Conservation and sustainable forest management activities as well as sustainable supply chain good practices carried out.

This FSP by reducing the global use of harmful agrochemicals, supporting the farmers to access finance, innovative and sustainable production practices, and competitively access consumer markets in Ecuador will help the government to work towards the achievement of the Sustainable Development Goals (SDGs). The SDGs most relevant to this project are:

SDG 1 ?No Poverty? by increasing income of farmers by enabling access to finance and adoption of sustainable agricultural practices.

SDG 2 ?No Hunger? by improving agricultural productivity and incomes of small-scale food producers, in particular family farmers, women, indigenous people.

SDG 3 ?Good Health and Well-being? by supporting farmers produce better quality and healthier food using fewer chemical inputs and improving sound management of agricultural wastes.

SDG 5 ?Gender Equality? by promoting gender perspective throughout agricultural activity, fostering women farmers empowerment, and enhancing their productivity.

SDG 6 ?Clean Water and Sanitation? by protecting water resources from contamination reducing agrochemicals and plastic runoff from agricultural activity by minimizing/eliminating the need of chemical inputs.

SDG 9 ?Industry, Innovation and Infrastructure? by enhancing the integration of farmers into value chains through access to finance, innovative and sustainable production practices, and competitively access consumer markets.

SDG 10 ?Reduced Inequalities? by increasing incomes of smallholder?s farmers.

SDG 12 ?Responsible Consumption and Production? by phasing out products containing harmful substances and improving the environmentally sound management of chemicals and wastes (including plastics) throughout their life cycle in agricultural activity.

SDG 14 ?Life below Water? by safeguarding marine life from exposure to hazardous chemicals and wastes.

SDG 15 ?Life on Lands? by promoting the introduction of sustainable agricultural production practices and the reduction of harmful chemical use in crops.

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[1] https://www.planificacion.gob.ec/wp-content/uploads/2021/09/Plan-de-Creaci?n-de-Oportunidades-2021-2025-Aprobado.pdf

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

Component 3 is related to ?Capacity development and knowledge dissemination? aiming at disseminating project results and experiences on best practices for the reduction and eventual elimination of harmful agorchemicals (POPs/HHPs) as well as the environmental sound management of plastics for agricultural use with a budget allocation of USD 660,000 and co-financing of USD 4,429,984.

Under Component 3 the project aims to build national knowledge on Agroecology through the implementation of two pilot projects introducing a participatory research and action. One of the main benefits of this approach is that farmers are mobilized to achieve the proposed goals and establish relationships with constituting networks or associations that manage to facilitate change in different environments, laying solid foundations of rural development sustainable.

In addition, to build capacity in farmers by providing knowledge and information for the adoption of sustainable agricultural practices and promote sharing experiences among them, under this Component the project will conduct training workshops and face to face exchange. A communication strategy will be deployed to promote the reduction of harmful agrochemiclas and implement an awareness raising campaign with the main objective to create consciousness on general public.

In a yearly basis, the project will identify, document, and systematize experiences resulting from the implementation of project activities obtaining lessons learned, rescuing all the knowledge accumulated over years, testimonies and life stories and good practices of the sector, for the generation of guides and/or manuals on best practices implemented throughout the life of the project, incorporating an integrated approach that includes the best agricultural practices and non-chemical options. Everything done at the local level will be registered and monitored and will serve as a lesson to be taken into account in other similar sectors. The implementation of strategies at the local level will serve as a basis for national level approaches and scalability. The project will seek to involve all relevant actors throughout the project implementation.

The child project will ensure these experiences are available at local level for national stakeholders as well as at global level through the global platform envisioned under FARM and outreach strategies. For this purpose, existing knowledge platforms in agricultural, financial inclusion, and other relevant areas to share findings will be equally used and promoted

Within every activity under this Component the project is aligned and will contribute to the Global FARM Programme Knowledge Management Strategy.

Furthermore, it should be noted that UNDP annually organizes meetings for Government Officers and Project Coordinators of all the UNDP-GEF funded Chemicals and Waste Projects in Latin America and the Caribbean. In these meetings, lessons learned, and best practices are shared among the countries which has created a coordination mechanism among all the projects in the region. Finally, UNDP will ensure that relevant information and lessons learned will be collected as input for the Mid-term Review and Terminal Evaluation.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

The budgeted M&E plan has been summarized in the table below:

GEF M&E requirements to be undertaken by Project Management Unit (PMU)	Indicative costs (US$)	Time frame
Inception Workshop and Report	10,000	Inception Workshop within 2 months of the First Disbursement
M&E required to report on progress made in reaching GEF core indicators and project results included in the project results framework	5,000	Annually and at mid-point and closure.
Preparation of the annual GEF Project Implementation Report (PIR)	5,000	Annually typically between June-August
Monitoring of Stakeholder Engagement Plan and Gender Action Plan	30,000	On-going.
Monitoring of Environmental and Social Safeguards	50,000	On-going.
Supervision missions	10,000	Annually
Learning missions	10,000	As needed
Independent Mid-term Review (MTR)	35,000	Add date included on cover page of Project Document
Independent Terminal Evaluation (TE)	35,000	Add date included on cover page of Project Document
TOTAL indicative COST	**190,000**	

For additional details kindly refer to Chapter VI ?Monitoring and Evaluation (M&E) Plan? of the UNDP

Project Document.

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

The project?s goal is to To reduce the global use of harmful agrochemicals by supporting farmers to access finance, innovative and sustainable production practices, and competitively access consumer markets in Ecuador.

At the local level, the implementation of coordinated demonstration actions with the private sector in the field will show the opportunities of institutional integration and coordination, private-driven investments, will demonstrate that the positive results of these pilot interventions would serve to improve and enforce current regulation and promote the recution of harmful agrochemicals and the adoption of sustainable agriculture practices, including the environmental soinf managemen of agricplastics.

Additional economic and social benefits that will be brought on by the project:

- Reduced health impact from the exposure to hazardous chemicals, particularly the use of harmful agrochemicals (POPs and HHPs) in agriculture production. The project estimates to increase awareness of 15,000 people, of which 6,000 are women and 9,000 are men.
- Job creation through opportunities enhanced in the deployment of alternatives as well as downcycling agri plastics waste.
- Improved policy, regulatory, monitoring and analysis frameworks, to safeguard human health and the environment.

The Global Environmental Benefits (GEB) of the project at the CEO endorsement stage, are the same as presented at the PIF stage. The positive impacts of the project will include the following:
- 7,800 direct project beneficiaries (2,721 women and 5,079 men)
- 322 MT of Greenhouse Gas Emissions Mitigated (metric tons of CO2e).
- 1,000 MT (290 MT of POPs and 710 MT of HHP) of pesticides avoided.
- 4.6 gTEQ avoided of emissions of POPs to air from.

As agreed during the FARM design phase the GEBs are measured 5 years after project implementation: the total amount of POPs/HHPs pesticides avoided will arise to 2,700 MT (783 MT of POPs and 1,917 of HHP) in Ecuador five (5) years after project implementation; the accrued GHG mitigated will arise to 1,128 MT and the accrued avoidance of POPs emissions to air will arise to 19.7 gTEQ.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
	High or Substantial		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

This Environmental and Social Management Framework (ESMF) was developed for the UNDP-supported, GEF-financed project ?Financing Agrochemical Reduction and Management (FARM) in Ecuador?.

This ESMF has been prepared for the submission of the UNDP project proposal to the GEF for the purposes of assisting in the assessment of the project?s potential environmental and social impacts. Preliminary analysis and screening conducted during the project development phase via UNDP?s Social and Environmental Screening Procedure (SESP) identified potential social and environmental risks associated with project activities including, in particular, upstream activities such as banning and phasing out of harmful agrochemicals (HHPs), demonstration activities, namely removing existing POPs/HHPs and integrated management of agrochemical-related plastic waste and initiatives selected under the Competitive Fund Mechanism. This screening resulted in the identification of nine risks, two of which were considered as ?High?, six as ?Moderate? and one as ?Low? significance, resulting in an overall social and environmental risk categorization of ?Substantial? for the Project.

This ESMF has been developed based on this project risk categorization to specify the processes that will be undertaken by the Project Management Unit for the additional assessment of potential impacts and identification and development of appropriate risk management measures, in line with UNDP?s Social and Environmental Standards.

This ESMF identifies the steps that will be followed during the inception phase of the project:

i) Strategic social and environmental assessments for upstream activities associated with new legislation, plans and fiscal instruments;

ii) Targeted assessments for the demonstration pilots that have been defined and based on the assessment, preparing, and approving appropriate an Environmental and Social Management Plan that will include a Pollution Prevention and Management Plan, Occupational Health and Safety Plan and Waste Management Plan for avoiding, and where avoidance is not possible, reducing, mitigating, and managing adverse impacts.

iii) Safeguards operational procedure for the Competitive Fund Mechanism and conducting an environmental and social screening for each activity to determine the level of assessment and management required.

This ESMF also details the roles and responsibilities for its implementation and includes a detailed budget and monitoring and evaluation plan.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
PIMS_6681_GEFID_10901_FARM_Ecuador Annex 9 - ESMF	**CEO Endorsement ESS**	
PIMS_6681_GEFID_10901_FARM_Ecuador Annex 5 - SESP	**CEO Endorsement ESS**	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

This project will contribute to the following Sustainable Development Goal (s): SDG 1 ?No Poverty?; SDG 2 ?No Hanger?; SDG 3 ?Good Health and Well-being?; SDG 5 ?Gender Equality?; SDG 6 ?Clean Water and Sanitation?; SDG 9 ?Industry, Innovation and Infrastructure?; SDG 10 ?Reduced Inequalities? by increasing incomes of smallholder?s farmers; SDG 12 ?Responsible Consumption and Production?; SDG 14 ?Life below Water?; SDG 15 ?Life on Lands?.				
This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD): UNSDCF 2022-2026 Effect 2: In 2026, the State and society advance towards the ecological transition and towards a sustainable and inclusive economy, decarbonized and resilient to the effects of climate change, conserving biodiversity, avoiding land degradation and the contamination of ecosystems, with a gender, inclusion and diversity approach. / CPD Output 2.1: Instruments and mechanisms are applied at national or sub-national level to manage natural resources in a sustainable way to mainstream climate change adaptation and mitigation and their effects, and to transition towards more sustainable productive system; CPD Output 2.2: Conservation and sustainable forest management activities as well as sustainable supply chain good practices carried out.				
	Objective and Outcome Indicators (no more than a total of 20 indicators)	**Baseline[1]**	**Mid-term Target[2]**	**End of Project Target**
Project Objective	To reduce the global use of harmful agrochemicals by supporting farmers to access finance, innovative and sustainable production practices, and competitively access consumer markets in Ecuador.			
	Indicator 1: **Mandatory** GEF Core Indicators 11: # direct project beneficiaries disaggregated by gender (individual people)	During PPG phase 311 direct project beneficiaries have participated in bilateral/roundtable meetings: Female: 159 Male: 152	2,300 Female: 802 Male: 1,498	7,800 Female: 2,721 Male: 5,079
	Indicator 2: **Mandatory** GEF Core Indicators 6: Greenhouse Gas Emissions Mitigated (metric tons of CO2e).	-	0 MT of GHG emissions mitigated.	322 MT of GHG emissions mitigated.[3]

	Indicator 3: **Mandatory** GEF Core Indicators 9: Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials, and products (metric tons of toxic chemicals reduced).	92.8 MT ton of obsolete pesticides (including POPs/HHP) eliminated by the GEF/UNDP PNGQ Project.	200 MT of pesticides avoided (POPs and HHP).	1,000 MT of pesticides avoided (58 MT of POPs: DDT; 232 MT of candidate POPs: Chlorpyrifos and 710 MT of HHP[4]).[5]
	Indicator 4: **Mandatory** GEF Core Indicators 10: Reduction, avoidance of emissions of POPs to air from point and non-point sources (grams of toxic equivalent gTEQ)	-	0.4 gTeq of emissions avoided.	4.6 gTeq of emissions avoided.[6]
Project Component 1	**Government policy and enforcement.**			

Outcome 1 Policy and investment frameworks incentivize reduction in use of harmful agrochemicals; and regulatory frameworks enhance sound agricultural chemicals management.	Indicator 5: Capacity built in government institutions measured by: a) Number of Customs and Enforcement officers trained on illegal trade prevention. b) Number of government officers trained on FAO Pesticide Registration Toolkit c) National Action Plan developed for International Code of Conduct application. d) Official Information Exchange Platform designed, and number of people trained for the identification, control, and final disposal of pesticides and wastes.	The GEF/UNDP PNGQ has trained 884 people (451 women and 433 men) from different key stakeholders? groups in the environmental sound managements of pesticides and related wastes (including plastics)	a) 20 Customs and Enforcement officers trained on illegal trade prevention. b) 30 government officers trained on FAO Pesticide Registration Toolkit. c) National Action Plan developed for International Code of Conduct application. d) 400 people trained for the identification, control, and final disposal of pesticides and wastes. (120 inspectors; 200 private sectors; 80 local/national government)	a) 50 Customs and Enforcement officers trained on illegal trade prevention. b) 30 government officers trained on FAO Pesticide Registration Toolkit. c) National Action Plan developed for International Code of Conduct application. d) Official Information Exchange Platform designed and 1000 people trained for the identification, control, and final disposal of pesticides and wastes. (300 inspectors; 500 private sectors; 200 local/national government)
	Indicator 6: National Harmful Agrochemicals Reduction Plan and Legal Framework Roadmap developed.	-	Legal Framework Roadmap developed.	One (1) National Harmful Agrochemicals Reduction Plan developed.

Outputs to achieve Outcome 1	Output 1.1. Training and outreach with customs authorities to avert illegal imports and trade of hazardous chemicals conducted. Output 1.2. Capacity of government institutions and the private sector to properly uptake, utilize, and adapt tools such as the FAO Pesticide Registration Toolkit, the International Code of Conduct on the distribution and use of pesticides, among others, that allow the proper enforcement of pesticides/plastic standards. Output 1.3. Institutional strengthening for the rapid identification of alternatives to agrochemicals with high environmental impact (i.e., HHP), agile registration processes of better products and strengthening of the procurement processes to facilitate the use of the alternatives found. Output 1.4. Institutional strengthening for the identification, control and final disposal of pesticides and their wastes. Incorporation of early warning strategies for waste generation. Output 1.5. Updating or elaboration of regulations at all levels (national and local), in coherence with the regional control of trade in agrochemical substances and applied throughout the life cycle of products / substances. (considering the recycling of plastics for agricultural use)			
Project Component 2	**Finance and investment.**			
Outcome 2 Widespread adoption of innovative safer alternatives and sustainable agricultural practices reduce demand for agrochemicals and effectively replace them. and agrochemical waste identified, and sustainably managed through strengthened waste management reduction or	Indicator 7: Economic Studies Developed and number of Fiscal Incentives Explored.	-	One (1) Report of Economic Valuation Studies. Five (5) feasible fiscal Incentives explored.	One (1) Report of Economic Valuation Studies. Five (5) feasible fiscal Incentives explored.
	Indicator 8: Finance programme tailored for farmers to adopt sustainable agriculture practices created.	No financial products tailored for adopting sustainable agriculture practices available.	One (1) Financial mechanism created.	One (1) Finance programme created. Five (5) farmers supported for applying to the financial mechanism.
	Indicator 9: Number of pilot projects implemented for building capacity in management of plastics for agricultural use in rural areas.	No pilot projects implemented	No pilot projects implemented	Two (2) pilot projects implemented

recycling systems.	Indicator 10: Competitive fund mechanism developed for the reduction of HHP use.	-	One (1) Competitive fund mechanism developed.	One (1) Competitive fund mechanism developed. Three (3) initiatives selected and implemented to reduce the use of HHP.
Outputs to achieve Outcome 2	Output 2.1. Economic valuation studies to evaluate the impact of the high per capita and per hectare consumption of agrochemicals in government spending conducted. Output 2.2. New fiscal incentives that favor reduction and/or substitution of hazardous pesticides explored. Output 2.3. Strengthening financial capacities to facilitate access to credit for farmers who use good practices. Create financing programs and risk management of value chains, applying concepts of green recovery considering environmental quality criteria (pollution), adaptation and mitigation of climate change. Output 2.4. Strengthening the capacity of the national extension units under Agrocalidad, Ministry of Agriculture and Rural Social Security, as the private associations to access financial mechanisms and incentives created by the project and on better sustainable agricultural practices to increase income and reduce the use of harmful agrochemicals in priority crops. Output 2.5. Technical support to government on public procurement to avoid acquiring hazardous substances and removing existing POPs/HHPs stockpiles provided, and capacities to sustainably manage or recycle plastic wastes and other types of waste associated with harmful agrochemicals built. Output 2.6. Development of a competitive fund mechanism to identify and finance innovative proposals and initiatives to reduce the use of HHP.			
Project Component 3	**Capacity development and knowledge dissemination.**			
Outcome 3 Information & KM platforms catalyse evidence-based decision-making and investments; and enhance FARM scale-up, replication and impact	Indicator 11: Number of pilots implemented in participatory research and action in agroecology.	No pilot projects implemented	No pilot projects implemented	Two (2) pilot projects implemented
	Indicator 12: Number of people reached with trainings and awareness raising activities for strengthening rural sector in sustainable agriculture production.	-	560 farmers (168 women and 392 men) trained and 800 people (400 women and 400 men) aware on sustainable agriculture production.	1,400 farmers (420 women and 980 men) trained and 2,000 people (1,000 women and 1,000 men) aware on sustainable agriculture production.

Outputs to achieve Outcome 3	Output 3.1. Promotion of participatory research and action in agroecology, to design and implement with farmers and the local population and proposals that increase agricultural sustainability through public and private extension units (Agrocalidad, MAG, Rural Social Security and Private Associations). Output 3.2. Facilitate the identification, documentation, systematization, and dissemination, so that key actors at the national and global level receive, share and apply the knowledge generated by the Project, incorporating an integrated approach that includes the best agricultural practices and non-chemical options. Output 3.3. Training and capacity building provided. Awareness, dialogue, and exchange strategies created to help the rural sector create healthy organic farming and connect its work with responsible consumers. Output 3.4. Promote the exchange of knowledge and experiences in South-South cooperation schemes and among the actors of the global program to strengthen the capacities of the regions in sustainable development of agriculture, considering buyers and producers, to ensure motivation in the use of best environmental practices to offer sustainable products through the global component.			
Project Component *4*	**Monitoring & Evaluation**			
Outcome 4 Monitoring & Evaluation	Indicator 13: Percentage of project expenditure spent on the FSP planned activities.	0%	40%	100%
Outputs to achieve Outcome 4	Output 4.1. M&E and adaptive management applied to assess project performance and GEB impact. Output 4.2. M&E tools provided to evaluate progress, challenges and lessons learned; and for ensuring future sustainability of achievements made through the project in reducing/ replacing HHPs and waste.			

[1] Baseline, mid-term and end of project target levels must be expressed in the same neutral unit of analysis as the corresponding indicator. Baseline is the current/original status or condition and needs to be quantified. The baseline can be zero when appropriate given the project has not started. The baseline must be established before the project document is submitted to the GEF for final approval. The baseline values will be used to measure the success of the project through implementation monitoring and evaluation.

[2] Target is the change in the baseline value that will be achieved by the mid-term review and then again by the terminal evaluation.

[3] As agreed during the FARM design phase the GEBs are measured 5 years after project implementation: the accrued GHG mitigated will arise to 1,128 MT in Ecuador five (5) years after project implementation

[4] HHP: Paraquat, Methomyl, Lambda-cyhalothrin, Aluminium phosphide, Oxamyl.

[5] As agreed during the FARM design phase the GEBs are measured 5 years after project implementation: the total amount of POPs/HHPs pesticides avoided will arise to 2,700 MT (783 MT of POPs and 1,917 of HHP) in Ecuador five (5) years after project implementation.

[6] As agreed during the FARM design phase the GEBs are measured 5 years after project implementation: the accrued avoidance of POPs emissions to air will arise to 19.7 gTEQ in Ecuador five (5) years after project implementation.

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Council Comments

1. Global (India, Viet Nam, Ecuador, Kenya, Lao PDR, Philippines, Uruguay). Financing Agrochemical Reduction and Management (FARM) (GEF ID 10872). Agency: UNEP, ADB, UNDP, UNIDO; GEF Project Financing: $37,441,500; Co-financing: $341,789,200.

? Canada Comments

? Canada supports this project, which would help to address the issue of persistent organic pollutants (POPS) pesticides in these countries, including the Philippines, where previous studies note that the increase in pesticide use has translated to poor rice yield, leading to increase in pesticide imports that contributes to the poverty of Filipino farmers.

? We appreciate that the relevant Philippine government agencies have been consulted and are now part of the forward planning for the GEF project addressing POPs pesticide issues in the Philippines. For example, we are aware that the Department of the Environment and Natural Resources (DENR), specifically the Environment Management Bureau, is working with the UNDP to address this issue, including under this proposed GEF project.

? Norway and Denmark Comments

? The limited presence and capacity at country of lead agency, e.g. UNEP, in the child project in Vietnam should be well taken into account. There may be limitations and challenges linked to regional back-up from UNEP.

? ADB?s role as implementing agency of this child project seems a bit challenging as they normally work as investor/donor of the project. FAO seems more relevant and experienced in this area in Vietnam.

? Synergy/leverage across related projects in Vietnam as well as across child projects is important. Earlier recommendations made by a number of projects on pesticides supported by FAO, AusAid and others in Vietnam need to be followed up accordingly.

? Sustainability needs to be more clearly spelled out in the document with stronger ownership of the government, local authority that goes beyond the project?s life.

? Private sector?s role and investment mobilization in green agricultural production should be further improved.

? Implementation capacity, cross-agency cooperation gaps should be assessed and addressed properly. The complex global project structure with many middle agencies will make the project costly and challenging in implementation process.

? We note the STAP Review comment on the potential inclusion of fertilizers. As a starting point we see a benefit in an integrated approach to all pollution within a sector where there are synergies to be made. From our perspective it is however difficult to assess project.

UNDP Response:

For UNDP projects (Ecuador and Lao PDR) synergies across other ongoing projects are identified as well as periodic interaction activities across child projects with Global FARM Programme to share experiences and improve results. In addition, project sustainability and private sector?s role and investment mobilization was further detailed within stakeholder analysis and co-financing details.

As per fertilizers, UNDP projects are aligned to Global FARM Programme which addresses pesticides and agricultural plastics.

? United Kingdom Comments

? The proposal is in line with current thinking on food, environment and health. Our only concern is linked to balance. A transition to a low (targeted and efficient use) chemical agriculture makes sense. The proposal promotes this through Integrated Pest Management. However, unless the areas targeted are biodiversity hot spots, a transition to a ?no-chemical? agriculture does not make sense. For example, Sri Lanka has just abandoned its no-chemical approach to agriculture due to reduced farm-level production, reduced supplies of staple foods and increased food prices.

UNDP Response: Noted. In UNDP projects promotes largely the adoption of sustainable agricultural practices such as IPM. When feasible no chemical alternatives will be also testes and promoted.

? Comment for all UNDP projects

The Council, having considered Document GEF/C.61/04, UNDP Third Party Review of Compliance with GEF Minimum Fiduciary Standards, takes note of the Independent Third-Party Review of UNDP and decides to:

? Require that all projects included in the Work Program implemented by UNDP be circulated by e-mail for Council review at least four weeks prior to CEO endorsement / approval. This shall take place until this requirement is reconsidered by the Council at its 65th meeting in December 2023. Project reviews will take into consideration the relevant findings of the UNDP audits and the management responses and note them in the endorsement review sheet that will be made available to Council during the 4-week review period.

UNDP Response: Noted.

STAP comments for FARM Programme (Parent)

STAP guidelines for screening GEF projects

PIF	What STAP looks for	Response

GEF ID: **10872**

Project Title: **Financing Agrochemical Reduction and Management (FARM)**

Date of Screening: November 11, 2021

STAP member screener

PIF	What STAP looks for	Response
G., & D?Odorico, P. (2021). Energy implications of the 21st-century agrarian transition. *Nature Communications*, *12*(1), 2319.https://doi.org/10.1038/s41467-021-22581-7 The PIF cited an alarming fact that a significant proportion of development disbursement and climate finance earmarked for agriculture supports projects focused on conventional agriculture. However, the project activities related to this issue mainly focus on addressing the public sector (government subsidies), private sector (chemical industry Extended Producer Responsibility, commodity certification schemes), and the financial sector (investment, banking, and insurance). We think some form of activities directly focused on addressing this concern should be included in this project. This could be stakeholder meetings to address this concern, awareness-raising campaigns, knowledge creation and dissemination efforts, etc. We commend the proponent for including agricultural plastics (mulch film, hothouse film, seed trays, irrigation drip tape, etc.) in the project, as this isan aspect that is largely less studied or addressed but with significant impact on soil quality, food quality and safety (Steinmetz et al., 2016. Plastic mulching in agriculture. Trading short-term agronomic benefits for long-term soil degradation? https://doi.org/10.1016/j.scitotenv.2016.01.153; Grossman 2015: https://ensia.com/features/the-biggest-source-of-plastic-trash-youve-never-heard-of/; Browne, https://www.bbc.com/future/bespoke/follow-the-food/why-foods-plastic-problem-is-bigger-than-we-realise.html). We would like to refer the proponent to articles related to alternatives to agricultural plastics: ? University of Minnesota Extension, 2021. Exploring alternatives to plastic mulch. https://blog-fruit-vegetable-ipm.extension.umn.edu/2021/01/exploring-alternatives-to-plastic-mulch.html ? Miles et al., 2015. Alternatives to Plastic Mulch in Vegetable Production Systems. https://www.researchgate.net/publication/296111767_Alternatives_to_Plastic_Mulch_in_Vegetable_Production_Systems		
Part I: Project Information **B. Indicative Project Description Summary**		
Project Objective	Is the objective clearly defined, and consistently related to the problemdiagnosis?	Yes ? these are clearly defined across all operationalcountries.
Project components	A brief description of the planned activities. Do these support the project's objectives?	Yes
Outcomes	A description of the expected short-termand medium-term effects of an intervention. Do the planned outcomes encompassimportant global environmental benefits? Are the global environmental benefitslikely to be generated?	Yes ? clear metrics of GEB calculations for pesticide reduction benefits and methods are provided though itwould be helpful to have some footnoting and backupof how they were calculated.

PIF	What STAP looks for	Response
Outputs	A description of the products and services which are expected to resultfrom the project. Is the sum of the outputs likely to contribute to the outcomes?	Yes, there are a series of outputs listed along with eachoutcome
Part II: Project justification	A simple narrative explaining the project's logic, i.e. a theory of change.	
1. Project description. Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)	Is the problem statement well-defined? Are the barriers and threats well described, and substantiated by data and references? For multiple focal area projects: does the problem statement and analysis identify the drivers of environmental degradation which need to be addressed through multiple focal areas; and is the objective well-defined, and can it only be supported by integrating two, or more focal areas objectives or programs?	Very good ? provides rationale and country context The multiple focal areas and the linkages and synergiesare also presented.

2) the baseline scenario or any associatedbaseline projects	Is the baseline identified clearly? Does it provide a feasible basis for quantifying the project's benefits? Is the baseline sufficiently robust to support the incremental (additional cost) reasoning for the project? For multiple focal area projects: are the multiple baseline analyses presented (supported by data and references), and the multiple benefits specified, including the proposed indicators; are the lessons learned from similar orrelated past GEF and non-GEF interventions described; and how did these lessons inform the designof this project?	Yes, and the outcomes are benchmarked with thebaseline very well.

PIF	What STAP looks for	Response
3) the proposed alternative scenario with a briefdescription of expected outcomes and components of the project	What is the theory of change? What is the sequence of events (required or expected) that will lead tothe desired outcomes? ? What is the set of linked activities,outputs, and outcomes to address the project's objectives? ? Are the mechanisms of changeplausible, and is there a well-informed identification of the underlying assumptions? ? Is there a recognition of what adaptations may be required duringproject implementation to respond to changing conditions in pursuit ofthe targeted outcomes?	Theory of change document is provided in congruencewith suggested STAP guidelines. A problem analysis diagram is also provided before the TOC, which is helpful. The theory of change can be further improvedby including underlying assumptions leading to expected outcomes and impacts.
5) incremental/additional cost reasoning and expected contributions from the baseline, the GEF trust fund, LDCF, SCCF, and co-financing	GEF trust fund: will the proposed incremental activities lead to the delivery of global environmental benefits? LDCF/SCCF: will the proposed incremental activities lead to adaptationwhich reduces vulnerability, builds adaptive capacity, and increases resilience to climate change?	Noted

6) global environmental benefits (GEF trust fund) and/or adaptation benefits (LDCF/SCCF)	Are the benefits truly global environmental benefits, and are they measurable? Is the scale of projected benefits both plausible and compelling in relation tothe proposed investment? Are the global environmental benefits explicitly defined? Are indicators, or methodologies, provided to demonstrate how the globalenvironmental benefits will be measured and monitored during project implementation?	Yes,

PIF	What STAP looks for	Response
	What activities will be implemented toincrease the project's resilience to climate change?	
7) innovative, sustainability and potential forscaling-up	Is the project innovative, for example, in its design, method of financing, technology, business model, policy, monitoring and evaluation, or learning? Is there a clearly-articulated vision of how the innovation will be scaled-up, for example, over time, across geographies, among institutional actors?Will incremental adaptation be required,or more fundamental transformational change to achieve long term sustainability?	Yes,
1b. Project Map and Coordinates. Please providegeo-referenced information and map where the project interventions will take place.		Provided
2. Stakeholders. Select the stakeholders that have participated in consultations during the project identification phase: Indigenous people and local communities;Civil society organizations; Private sector entities. If none of the above, please explain why. In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles andmeans of engagement.	Have all the key relevant stakeholders been identified to cover the complexityof the problem, and project implementation barriers? What are the stakeholders' roles, and how will their combined roles contribute to robust project design, to achieving global environmental outcomes, and to lessons learned and knowledge?	Stakeholder mapping is included in project design and stakeholder satisfaction also in outcome goals though aformal map is not presented since this is a global project. Each case will have different stakeholder maps.

3. Gender Equality and Women's Empowerment. Please briefly include below any gender dimensions relevant to the project, and any plansto address gender in project design (e.g. gender analysis). Does the project expect to include anygender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes/no/ tbd.	Have gender differentiated risks and opportunities been identified, and were preliminary response measures described that would address these differences? Do gender considerations hinder fullparticipation of an important	Gender equity plan with clear set of question to beaddressed and linkages with policies are provided.

PIF	What STAP looks for	Response
If possible, indicate in which results area(s) theproject is expected to contribute to gender equality: access to and control over resources; participation and decision-making; and/or economic benefits or services. Will the project's results framework or logical framework include gender-sensitive indicators?yes/no /tbd	stakeholder group (or groups)? If so, how will these obstacles be addressed?	
5. Risks. Indicate risks, including climate change, potential social and environmental risksthat might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design	Are the identified risks valid and comprehensive? Are the risks specifically for things outside the project's control? Are there social and environmental riskswhich could affect the project? For climate risk, and climate resilience measures: ? How will the project's objectives or outputs be affected by climate risks overthe period 2020 to 2050, and have the impact of these risksbeen addressed adequately? ? Has the sensitivity to climatechange, and its impacts, beenassessed? ? Have resilience practices and measures to address projected climate risks and impacts been considered? How will these bedealt with? ? What technical and institutionalcapacity, and information, will be needed to address climate risks and resilience enhancement measures?	Risk management table is also included Climate risk screening provided. More detailed climaterisk assessment is encouraged.

6. Coordination. Outline the coordination withother relevant GEF-financed and other related initiatives	Are the project proponents tapping intorelevant knowledge and learning generated by other projects, including GEF projects?	Yes ? there is listing of coordination prospects provided with public and private sector and donors.

PIF	What STAP looks for	Response
	Is there adequate recognition of previous projects and the learning derived from them? Have specific lessons learned fromprevious projects been cited? How have these lessons informed the project's formulation? Is there an adequate mechanism to feed the lessons learned from earlier projects into this project, and to share lessons learned from it into future projects?	
8. Knowledge management. Outline the "Knowledge Management Approach" for the project, and how it will contribute to the project'soverall impact, including plans to learn from relevant projects, initiatives and evaluations.	What overall approach will be taken,and what knowledge management indicators and metrics will be used? What plans are proposed for sharing,disseminating and scaling-up results, lessons and experience?	Yes adequately provided

STAP's advisory response

STAP advisory response	*Brief explanation of advisory response and action proposed*
1. Concur	STAP acknowledges that on scientific or technical grounds the concept has merit. The proponent is invited to approach STAPfor advice at any time during the development of the project brief prior to submission for CEO endorsement. * In cases where the STAP acknowledges the project has merit on scientific and technical grounds, the STAP will recognize thisin the screen by stating that ***"STAP is satisfied with the scientific and technical quality of the proposal and encourages the proponent to develop it with same rigor. At any time during the development of the project, the proponent is invited to approach STAP to consult on the design."***

2. Minor issuesto be considered during project design	STAP has identified specific scientific /technical suggestions or opportunities that should be discussed with the project proponentas early as possible during development of the project brief. The proponent may wish to: (i) Open a dialogue with STAP regarding the technical and/or scientific issues raised; (ii) Set a review point at an early stage during project development, and possibly agreeing to terms of reference for anindependent expert to be appointed to conduct this review. The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEOendorsement.
3. Major issuesto be considered during project design	STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical methodologicalissues, barriers, or omissions in the project concept. If STAP provides this advisory response, a full explanation would also be provided. The proponent is strongly encouraged to: (i) Open a dialogue with STAP regarding the technical and/or scientific issues raised; (ii) Set a review point at an early stage during project development including an independent expert as required. The proponent should provide a report of the actionagreed and taken, at the time of submission of the full project brief for CEO endorsement.

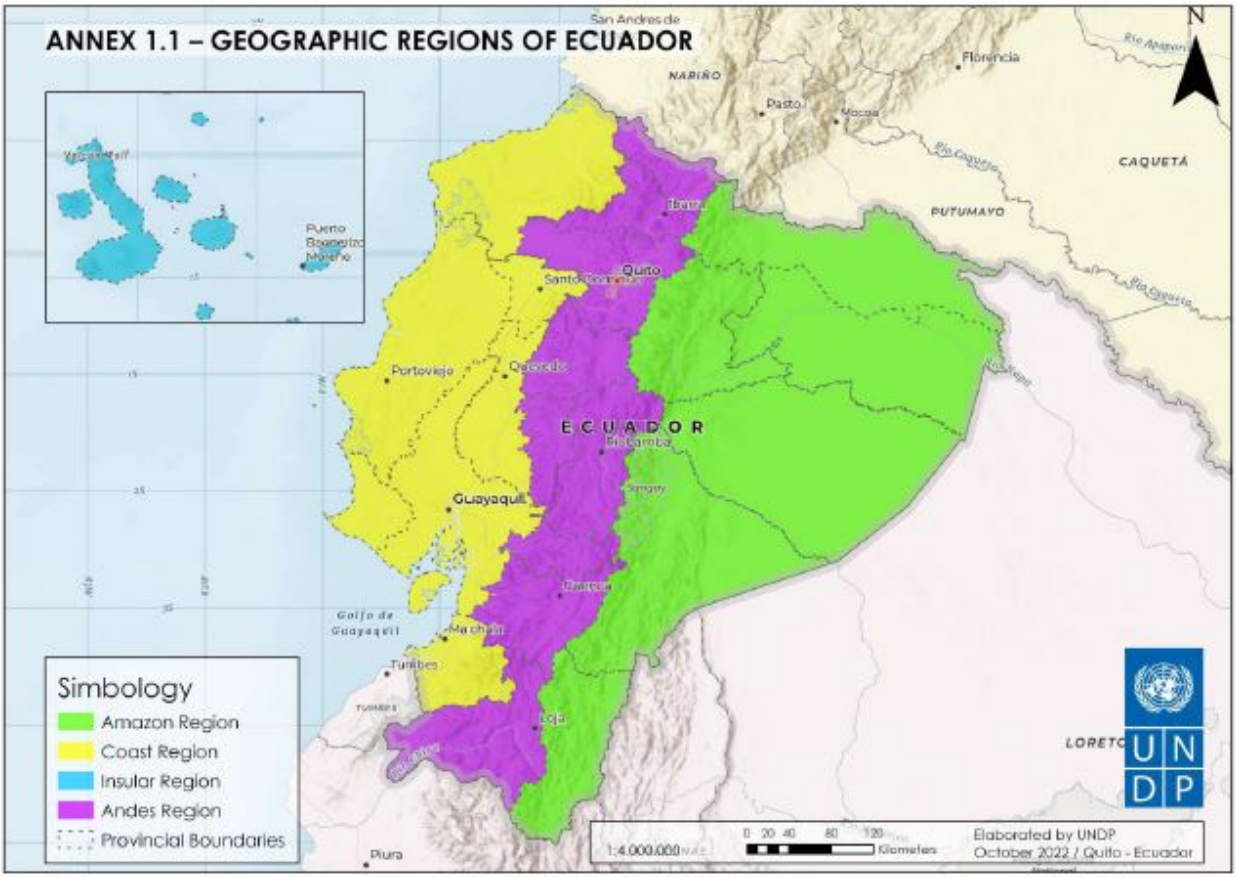
ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

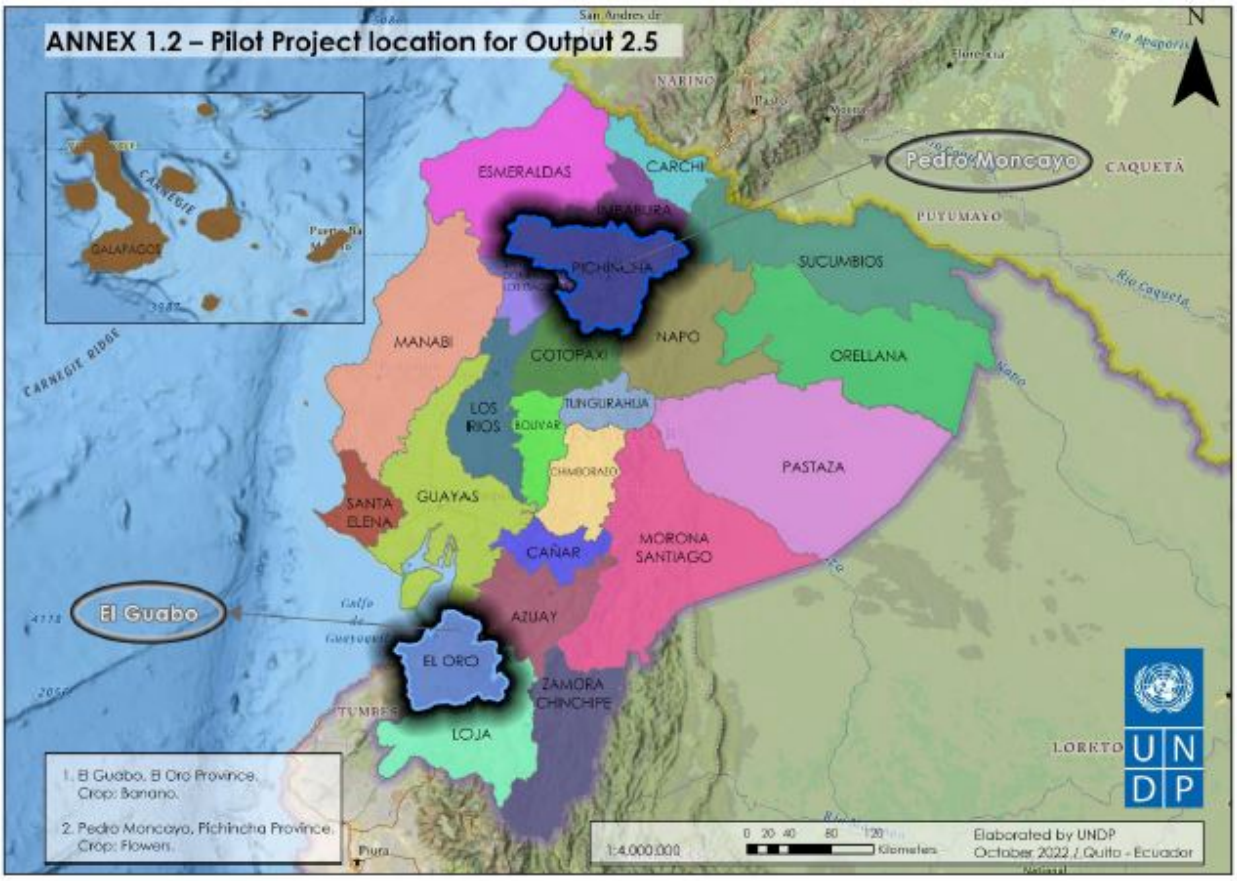
PPG Grant Approved at PIF: **140,000**

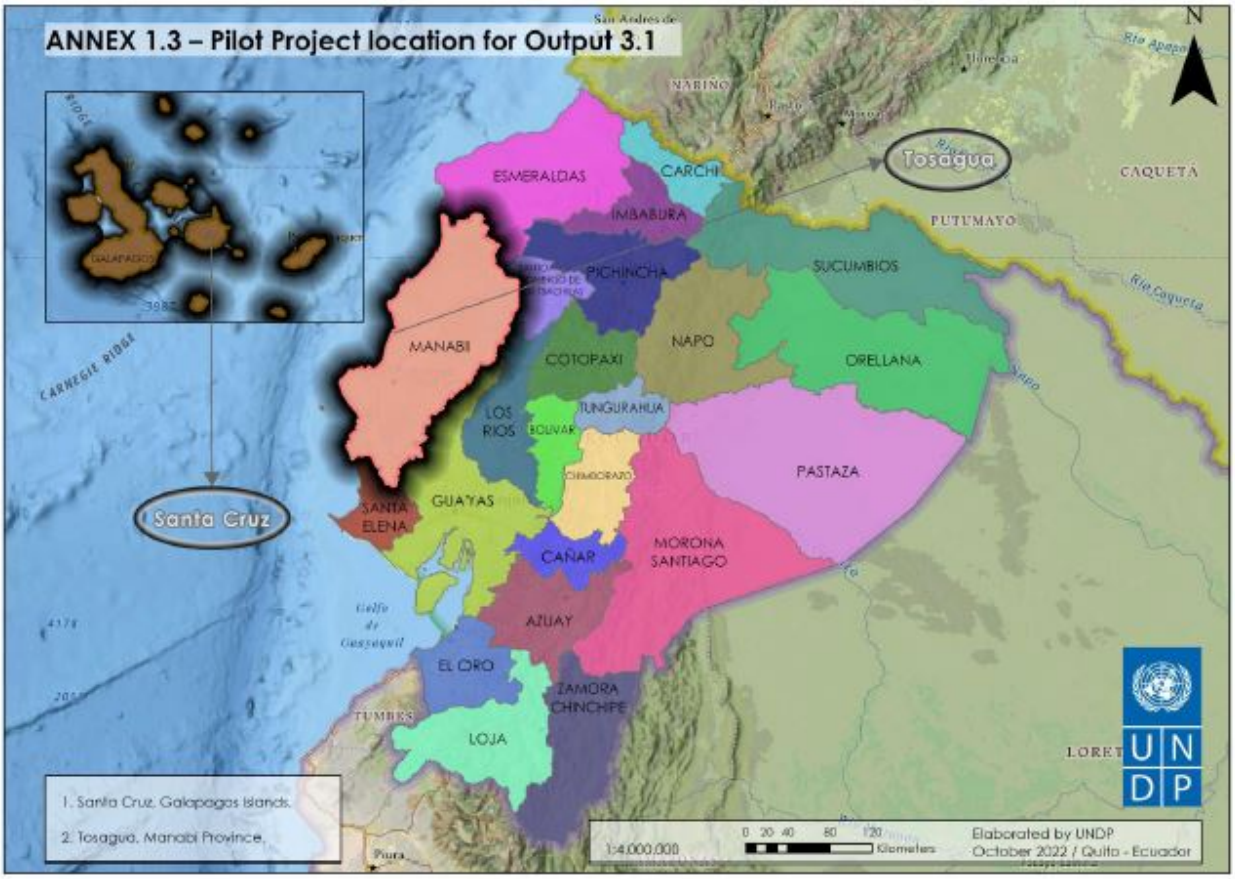
Project Preparation Activities Implemented	*GETF/LDCF/SCCF Amount ($)*		
	Budgeted Amount	***Amount Spent To date***	***Amount Committed***
Financing Agrochemical Reduction and Management (FARM) in Ecuador	140,000.00	62,944.76	77,055.24
Total	140,000.00	62,944.76	77,055.24

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.


ANNEX 1.1 – GEOGRAPHIC REGIONS OF ECUADOR
N
NARIÑO
Florencia
Pasto
Mocoa
CAQUETÁ
PUTUMAYO
Río Caquetá
Ibarra
Quito
Portoviejo
Quevedo
ECUADOR
Guayaquil
Cuenca
Machala
Tumbes
Loja
Piura
LORETO
Simbology
Amazon Region
Coast Region
Insular Region
Andes Region
Provincial Boundaries
1:4.000.000
0 20 40 80 120
Kilometers
Elaborated by UNDP
October 2022 / Quito - Ecuador


ANNEX 1.2 – Pilot Project location for Output 2.5
N
ESMERALDAS
CARCHI
IMBABURA
PICHINCHA
SUCUMBIOS
NAPO
ORELLANA
MANABI
COTOPAXI
TUNGURAHUA
LOS RIOS
BOLIVAR
CHIMBORAZO
PASTAZA
GUAYAS
SANTA ELENA
CAÑAR
MORONA SANTIAGO
AZUAY
EL ORO
ZAMORA CHINCHIPE
LOJA
TUMBES
Pedro Moncayo
CAQUETÁ
PUTUMAYO
El Guabo
GALAPAGOS
CARNEGIE RIDGE
LORETO
1. El Guabo, El Oro Province. Crop: Banana.
2. Pedro Moncayo, Pichincha Province. Crop: Flowers.
1:4.000.000
0 20 40 80 120
Kilometers
Elaborated by UNDP
October 2022 / Quito - Ecuador
UNDP



ANNEX E: Project Budget Table

Please attach a project budget table.

Expenditure Category	Detailed Description	Component (USDeq.)						Total (USDeq.)	Responsible Entity
		Component 1	*Component 2*	*Component 3*	*Sub-Total*	*M&E*	*PMC*		(Executing Entity receiving funds from the GEF Agency)[1]

Equipment	Standard IT equipment				-		1,185	1,185	Ministry of Environment, Water and Ecological Transition (MAATE)
Equipment	Standard office equipment				-		500	500	Ministry of Environment, Water and Ecological Transition (MAATE)
Grants	Grants to support the implementation of 2 Business Pilots for plastic management (Output 2.5) and 3 initiaves selected by the competitive fund mechanism (Output 2.6). UNDP policies on Low-Value Grant will be followed		459,100		459,100			459,100	Ministry of Environment, Water and Ecological Transition (MAATE)

Sub-contract to executing partner	Direct project services from UNDP for a limited set of activities, including personnel hiring, processing of payments and travel, procurement and hiring of consultants.				-		119,315	119,315	Ministry of Environment, Water and Ecological Transition (MAATE)
Contractual services-Individual	One KM Officer to supprort documentation and systematization of knowledge at national and global level (USD 15,000/y) + 30% of Project Coordinator's costs: the Project Coordinator will undertake day-to-day project implementation, administration, procurement and management activities at USD$42,200 per year (USD$12,660 per year will be charged to this component). See annex 7 for additional details			138,300	138,300			138,300	Ministry of Environment, Water and Ecological Transition (MAATE)

Contractual services-Individual	One local individual (Project Administrative Assistant). See annex 7 for additional details				-		47,976	47,976	Ministry of Environment, Water and Ecological Transition (MAATE)
Contractual services-Individual	One local individual to support financing programme development tailored to sustainable agriculture and farmers financing inclusion ($35,000 / yr) + 40% of Project Coordinator's costs: the Project Coordinator will undertake day-to-day project implementation, administration, procurement and management activities at USD$42,200 per year (USD$16,880 per year will be charged to this component). See annex 7 for additional details		259,400		259,400			259,400	Ministry of Environment, Water and Ecological Transition (MAATE)

Contractual services-Individual	One local individual to support the development of the National Harmful Agrochemicals Reduction Plan under Output 1.3 at $35,000 per year + 30% of Project Coordinator's costs: the Project Coordinator will undertake day-to-day project implementation, administration, procurement and management activities at USD$42,200 per year (USD$12,660 per year will be charged to this component). See annex 7 for additional details	238,300			238,300			238,300	Ministry of Environment, Water and Ecological Transition (MAATE)

Contractual services-Individual	One Project Monitoring & Evaluation Officer engaged for the coordination, implementation, oversight and follow-up of the Gender Action Plan, Social and Environmental Risks Management and the Stakeholder Engagement Plan follow-up as well as Mandatory reports production at USD$16,000/year. Activities include M&E of GEF core indicators and project results framework, GEF Project Implementation Report (PIR), and Monitoring of Environmental Social and Management Framework and Plan. The project will establish synergies with other UNDP initiatives on Chemical &Waste. See Annex 7 for additional details.				-	80,000		80,000	Ministry of Environment, Water and Ecological Transition (MAATE)

Contractual services-Company	Contractual services for Output 1.4 coordination platform for the improvement of identification, control and disposal of pesticides (with eraly warnings) within government authorities + Contractual services for conducting field tests for the identification of alternatives to harmful agrochemicals.	116,200			116,200			116,200	Ministry of Environment, Water and Ecological Transition (MAATE)
Contractual services-Company	Contractual services for research activities such as lab anlysis and/or testing activities within the participatory research and action in agroecology activities; technical support for connecting platforms between farmers and responsible consumers			240,000	240,000			240,000	Ministry of Environment, Water and Ecological Transition (MAATE)

Contractual services-Company	One Environment and Social Impact Assessment Consulting Firm including SESAs, 4 targeted assessments and stand alone ESMP. (including Capacity building in SES)	50,000			50,000			50,000	Ministry of Environment, Water and Ecological Transition (MAATE)
Contractual services-Company	Services to support the implementation of Output 2.5: i) for POPs elimination (58 Ton of DDT), ii) plastic waste management, iii) business model training and technical assitance to CSO for implementing plastics management pilots.		1,016,000		1,016,000			1,016,000	Ministry of Environment, Water and Ecological Transition (MAATE)

International Consultants	One International Consultant to support the capacity building programme for adopting international tools (FAO Pesticide Registration Toolkit; International Code of Conduct) + one International consultant to support the identification of alternatives within the National Harmful agrochemicals reduction plan. See annex 7 for additional details	120,000			120,000			120,000	Ministry of Environment, Water and Ecological Transition (MAATE)
International Consultants	One International Consultant for the MTR $25,000 and One International Consultant for the TE $25,000. See M&E budget table on PRODOC section VI.				-	50,000		50,000	Ministry of Environment, Water and Ecological Transition (MAATE)

International Consultants	One International specialist in financial mechanisms and incentives. See Annex 7 for additional details.		62,500		62,500			62,500	Ministry of Environment, Water and Ecological Transition (MAATE)
Local Consultants	One Local consultant for MTR $10,000 and one Local Consultant for TE $10,000. See M&E budget table on PRODOC section VI.				-	20,000		20,000	Ministry of Environment, Water and Ecological Transition (MAATE)
Local Consultants	One local consultant to support the devlopment and implementation of a communication strategy and aware raising campaign under Output 3.3. See Annex 7 for additional details.			85,000	85,000			85,000	Ministry of Environment, Water and Ecological Transition (MAATE)

Local Consultants	One local cosultant for the development of economic valuation studies + one local individual for the development of the competetive fund mechanism. See Annex 7 for additional details.		130,000		130,000			130,000	Ministry of Environment, Water and Ecological Transition (MAATE)
Local Consultants	One local institutional/legal Specialist to support the legal roadmap design and the drafting of required regulations/policies + 1 local consultant to support Customs and Enforcement training. See annex 7 for additional details	120,000			120,000			120,000	Ministry of Environment, Water and Ecological Transition (MAATE)
Training, Workshops, Meetings	Inception workshop (see M&E budget table for additional details)				-	10,000		10,000	Ministry of Environment, Water and Ecological Transition (MAATE)

Training, Workshops, Meetings	Training and workshops on sustainable agricultural practices in rural sector to support the reduction of harmful agrochemicals in crop production.			75,000	75,000			75,000	Ministry of Environment, Water and Ecological Transition (MAATE)
Training, Workshops, Meetings	Training workshops, seminars and meetings to strengthen project management capabilities				-		600	600	Ministry of Environment, Water and Ecological Transition (MAATE)
Training, Workshops, Meetings	Trainings for Output 2.3, 2.4 and 2.5 to build capacity in government extension units, financial institutuion and farmers for the creation/adoption of sustainble financial mechanisms.		62,524		62,524			62,524	Ministry of Environment, Water and Ecological Transition (MAATE)

Training, Workshops, Meetings	Trainings under Component1 for institutional strengthening in agrocehmicals management (including agriplastics) and to avert illegal imports trade; SESP Capacity building/training expenses.	58,000			58,000			58,000	Ministry of Environment, Water and Ecological Transition (MAATE)
Travel	Supervision and learning missions. See M&E budget table on PRODOC section VI				-	20,000		20,000	Ministry of Environment, Water and Ecological Transition (MAATE)
Travel	Travel to support Knowledge sharing, communication and local capacity building support in rural sector, including participation at Global FARM activities. See Annex 7 for additional details.			66,700	66,700			66,700	Ministry of Environment, Water and Ecological Transition (MAATE)

Travel	Travel to support Output 1.1 and Output 1.2 in the involvement and capacity strengthened of different stakeholders.	52,500			52,500			52,500	Ministry of Environment, Water and Ecological Transition (MAATE)
Travel	Travel to support the implemntation of the activities for Component 2, mainly under Outputs 2.3, 2.5 and 2.6		45,000		45,000			45,000	Ministry of Environment, Water and Ecological Transition (MAATE)
Office Supplies	Basic office supplies for duration of project period				-		500	500	Ministry of Environment, Water and Ecological Transition (MAATE)
Other Operating Costs	Audio Visual and Print Production Costs to raise stakeholders' awareness on the impacts on health and the enviroment due harmful agrochemicals as well as promoting responsible consumption			60,000	60,000			60,000	Ministry of Environment, Water and Ecological Transition (MAATE)

Other Operating Costs	Audio Visual and Print Production Cots to support the development of policies, policy instruments, or regulatory frameworks influenced (at national or sub-national level) to improve agrochemicals management as well as support the ESMF requirements.	45,000			45,000			45,000	Ministry of Environment, Water and Ecological Transition (MAATE)
Other Operating Costs	Insurance for Project's IT equipment				-		400	400	Ministry of Environment, Water and Ecological Transition (MAATE)
Other Operating Costs	Office Space Rent for Project Duration				-		10,000	10,000	Ministry of Environment, Water and Ecological Transition (MAATE)

Other Operating Costs	Printing and Production to support the devlopment of economic studies and awareness raising activities among stakeholders.		40,000		40,000			40,000	Ministry of Environment, Water and Ecological Transition (MAATE)
Other Operating Costs	Required materials for the implementation of field activities within Outputs 2.3: personal protection equipments, labels, hoses, sampling material, etc. For the technical assistance of farmers who adopt sustainable production practices applying financial mechanisms; and 2.5: storage containers, irrigation hoses, personal protection equipments, sampling material, measurment equipments, and labels.		80,000		80,000			80,000	Ministry of Environment, Water and Ecological Transition (MAATE)

Other Operating Costs	Translation of MTR and TE				-	10,000		10,000	Ministry of Environment, Water and Ecological Transition (MAATE)
Other Operating Costs	UNDP Mandatory Audit (USD$2,500 per year for 4 years)				-		10,000	10,000	Ministry of Environment, Water and Ecological Transition (MAATE)
Grand Total		800,000	2,154,524	665,000	3,619,524	190,000	190,476	4,000,000	

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to

demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).