United Nations Development Programme

Project Document template for nationally implemented projects financed by the GEF/LDCF/SCCF Trust Funds

<table>
<tr><td colspan="4">Project title: National Program for the environmental Sound Management and Live Cycle Management of Chemical Substances.</td></tr>
<tr><td>Country: Ecuador</td><td>Implementing Partner: Ministry of Environment</td><td>Responsible Party: Ministry of Mines</td><td>Management Arrangements: National Implementation Modality (NIM)</td></tr>
<tr><td colspan="4">UNDAF/Country Programme Outcome:

Outcome 4: By 2018, support has been provided to strengthening institutional and citizen capacities to promote the rights of nature, create conditions for a sustainable development, and improve the resilience and risk management facing the impacts of climate change and natural and man-made disasters.</td></tr>
<tr><td colspan="4">UNDP Strategic Plan Output: Output 1.3: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals and waste.</td></tr>
<tr><td colspan="2">UNDP Social and Environmental Screening Category:

Overall Risk Rating: Low Risk

Risk Categories: 1. Biodiversity Conservation and Natural Resource Management; 3. Community Health, Safety and Working Conditions; 5. Displacement and Resettlement; 6. Indigenous Peoples and 7. Pollution Prevention and Resource Efficiency</td><td colspan="2">UNDP Gender Marker:

GEN1</td></tr>
<tr><td colspan="2">Atlas Project ID/Award ID number: 00100779</td><td colspan="2">Atlas Output ID/Project ID number: 00103569</td></tr>
<tr><td colspan="2">UNDP-GEF PIMS ID number: 5706</td><td colspan="2">GEF ID number: 9203</td></tr>
<tr><td colspan="2">Planned start date: Nov. 2017</td><td colspan="2">Planned end date: Oct. 2022</td></tr>
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LPAC date: To be decided

Brief project description:

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:

1) 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.
2) 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).
3) 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).
4) 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.

It is expected that the project will directly benefit a total of 31,187 direct project beneficiaries (9,356 female and 21,831 male) for whom the risk of hazardous chemicals and waste will have been reduced by the end of the project.

FINANCING PLAN	
GEF Trust Fund *or LDCF or SCCF or other vertical fund*	USD 8,490,000
UNDP TRAC resources	USD 0
Cash co-financing to be administered by UNDP	USD 0
(1) Total Budget administered by UNDP	**USD 8,490,000**
PARALLEL CO-FINANCING (*all other co-financing that is not cash co-financing administered by UNDP)*	
UNDP	USD 0
Government	USD 36,640,180
Private Sector	USD 3,931,248
(2) Total co-financing	**USD 40,571,428**
(3) Grand-Total Project Financing (1)+(2)	**USD 49,061,428**
SIGNATURES	

[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 use to indicate **emanation of a chemical substance to atmosphere, water and soil**.

Signature: Minister of Environment	**Agreed by Implementing Partner** **Ministry of Environment**	**Date/Month/Year**
Signature Minister of Mines	**Agreed by Responsible Party** **Ministry of Mines**	**Date/Month/Year:**
Signature: UNDP Resident Representative	**Agreed by UNDP**	**Date/Month/Year:**

TABLE OF CONTENTS

TABLES

FIGURES

ACRONYMS

AGROCALIDAD	Ecuadorian Agency for Quality Assurance of the Agricultural Sector
SAE	Ecuador Accreditation Service
AME	Ecuador´s Municipalities Association
APCSA	Industry Association for Crop Protection and Animal Health
APROPLASMIN	Association of Owners of Plants of Ore Reduction, Smelting and Refining of Mineral Substances of El Oro Province
ARCOM	Agency of Mining Regulation and Control
ARM	Alliance for Responsible Mining
ASGM	Artisanal and Small-Scale Gold Mining
AWP	Annual Work Programme
CBA	Cost Benefit Analysis
CDR	Combined Delivery Report

CEER	Centro Ecuatoriano de Eficiencia de Recursos
CFM	Competitive Funds Mechanisms
CO	Country Office
c-octaBDE	Commercial octabromodiphenyl ether
CoI	Cost of Inaction
COMEX	Ministry of Foreign Trade
CONGOPE	Consortium of Autonomous Provincial Governments of Ecuador
CP	Country Programme
ENAMI EP	National Mining Company
FSP	Full Sized Project
GAD	Autonomous Decentralized Government
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
GoE	Government of Ecuador
HCF	Health Care Facility
HCW	Health Care Waste
Hg	Mercury
ICM	Interagency Coordinating Mechanism
INIAP	National Institute of Agricultural Research
INIGEMM	National Institute of Geological Research, Mining, Metallurgical
INEN	Ecuador Normalization Service
INNOVAGRO	Ecuadorian Chamber of the Agricultural Innovation and Technology Industry
IP	Implementation Partner
LCM	Life-Cycle Management
MAE	Ministry of Environment
MEER	Ministry of Electricity and Renewable Energy
MAGAP	Ministry of Agriculture, Livestock, Aquaculture and Fisheries
M&E	Monitoring and Evaluation
MICSE	Coordination Ministry for Strategic Sectors
MIPRO	Ministry of Industry and Productivity
MoM	Ministry of Mines
MOU	Memorandum of Understanding
MSP	Medium Sized Project
NPD	National Programme Director
OP	Obsolete Pesticides
PB	Project Board
PIF	Project Identification Form
PIR	GEF Project Implementation Report
PFOs	Perfluorooctane Sulfonic Acid
PMU	Project Management Unit
PNGIDS	National Program for the Integral Management of Solid Waste
POP	Persistent Organic Pollutant

POPP	Programme and Operations Policies and Procedures
PPG	Project Preparation Grant
RFP	Request for proposals
SENAE	National Customs Secretariat
SENAGUA	National Water Secretariat
STAP	GEF Scientific Technical Advisory Panel
UNDP	United Nations Development Programme
UNDP-GEF	UNDP Global Environmental Finance Unit
WG	Working Group
WM	Waste Management

I. DEVELOPMENT CHALLENGE

The Ecuador project aims to protect human health and the environment by improving the sound life-cycle management (LCM) of chemicals of concern, with a particular focus on Persistent Organic Pollutants (POPs) and mercury (Hg). Both are persistent substances that do not readily break down in the environment, bio-accumulate in the food chain and are able to travel long distances far away from the place where they have been released. Because of their detrimental impact on human and environmental health, they are considered a global threat, impacting poor communities the most, because they face the highest risk of exposure due to their occupations, living conditions and reliance on polluted water and food.

Mercury: To address the threats posed by mercury, the GoE signed the Minamata Convention on Mercury (Hg) on October 10, 2013. With an Executive Decree (No. 988) the President of Ecuador ratified all articles of the Minamata Convention on Mercury on April 8, 2016. Ecuador's 2008 Mercury Inventory (an update is expected to be published by September 2017) identified the country's two main mercury release sources as: *Products containing Mercury* (37,080.75 kg Hg/yr) and *Primary Production of Metals* (4,931.47 kg Hg/yr) (Artisanal and Small Scale Gold Mining - ASGM). Ecuador's national *Zero Mercury Plan (2013)* therefore predominantly focuses on measures to reduce mercury from these two sources.

ASGM: In 2010, ARCOM identified a total of 1,349 mining activities[2]. In 2017 it was estimated that this number had increased to 1,700 as a result of increases in the price of gold. A productive artisanal mining sector serves as a source of jobs and income for communities in remote locations, contributing to regional development and mitigating the rural exodus. However, ASGM practices are generally characterized by low technology use, poor working conditions, lack of technical knowledge, low production yields, and limited formalization. As most artisanal miners are not formalized, potential tax and royalty revenues are lost and do not contribute to state revenues. The application of low technology practices cause significant damage to the environment resulting in deforestation, biodiversity loss, river siltation, soil erosion as well as water and soil contamination from the application of hazardous chemicals like mercury and cyanide in ore processing. Ecuador holds approximately 10% of the world's biodiversity and poor ASGM practices are considered a major threat to the country's sensitive ecosystems. Environmental pollution caused by ASGM also impacts downstream livelihoods and quality of life (e.g. agricultural export products, water/food contamination) and has resulted in a trans-boundary pollution dispute with the Peruvian government.

ASGM is estimated to account for 85% of Ecuador's national gold production[1] and is thought to produce between 10 and 20 tonnes per year[3,4]). The majority of mining occurs in the south of the country, with the three main ASGM mining areas being Portovelo-Zaruma (Province of El Oro), Ponce Enriquez (Province of Azuay), and Nambija and Chinapintza (Province of Zamora Chinchipe). A mercury baseline assessment conducted during the project's PPG phase estimated the release of Hg from the non-industrial ASGM level at 5.1 tonnes/yr[5] (value taken from national ASGM expert repot made for the PPG phase, see Annex L). A comprehensive regulatory framework to address the adverse impacts of ASGM is in place in Ecuador, however, ensuring environmental compliance of the non-industrial informal ASGM sector remains a challenge. Barriers to improve ASGM practices and reduce Hg releases include a lack of: mining education; access to alternative technologies/practices; financing to procure cleaner technologies; access to markets which buy responsibly produced gold at higher prices; mistrust of miners towards government institutions; and formalization procedures that are complicated for informal miners to adhere to.

[2] A mining activity is defined by MoM as mining area legally registered in which one miner is the titleholder and he/she has a number of other miners working in the area.

[3] Veiga, M. M., Angeloci, G., Hitch, M. & Colon Velasquez-Lopez, P. (2014). Processing centres in artisanal gold mining. J. Clean. Prod. 64, 535–544

[4] The Global Environment Facility. (2015). GEF-6 Project Identification Form (PIF). Retrieved from http://www.thegef.org/gef/sites/thegef.org/files/gef_prj_docs/GEFProjectDocuments/Chemicals%20and%20Waste/Ecuador%20-%20(9203)%20-%20National%20Program%20for%20the%20environmental%20Sound%20Manag/08-26-15_PIF_request_document_revised.pdf

[5] Baseline on the use of mercury in Artisanal and Small Scale Gold Mining (Luis V. Chinchay Rojas, December 2016).

Products Containing Mercury: Mercury is used in a variety of products, including thermometers, blood pressure meters and energy saving lamps. During manufacturing, as a result of breakage during use or when the product is discarded, these products can release Hg and impact human health and the environment. To address these threats, Ecuador's main priorities are to i) support the continued phase-out/down of Hg containing products; and, ii) improve the management, treatment and disposal of mercury containing wastes. Ecuador's priority Hg containing products are medical devices (40 tonnes of medical products containing ~ 164 kg of Hg, were in use in 2016 (MSP)) and energy saving lamps (28 kg of mercury is contained in 144 tonnes of lamps currently in use and imported during the period (2013-2016). When the Minamata Convention enters into force, its parties will be required to phase out these products by 2020. However, the GoE currently faces challenges in strengthening import procedures, identifying and introducing mercury-free alternatives, creating capacity to conduct cost-benefit analyses (CBAs) to make the case for phase-out, improving the capacity of entities managing these types of products and supporting the implementation of a strengthened regulatory and policy framework to support phase-down, all necessary to achieve the 2020 Minamata Convention goal.

POPs: To address the threats posed by POPs, the Government of Ecuador signed the Stockholm Convention on POPs on August 28, 2001 and ratified the Convention on June 7, 2004. The country prepared a National Implementation Plan (NIP) in 2006 and updated it in 2009. A second NIP update is foreseen for 2017. The 2009 NIP lists Ecuador's most pressing national POPs priorities, which are: 1. *Policy Strengthening*; 2. *Strengthening of monitoring and evaluation capacity*; 3. *Improvement of the management of PCBs (currently being addressed by a GEF/UNDP PCB project)*; 4. *Improvement of the management of POPs pesticides*; 5. *Reducing emissions of unintentionally produced POPs*; 6. *Management of contaminated sites*; and *7. Information management, creating awareness and undertaking research*.

Obsolete (POPs) pesticides, related wastes and contaminated sites: AGROCALIDAD inventoried in 2016 about 600 sites and identified a quantity of 5 tonnes of obsolete pesticides. An additional 25 tonnes are expected to be identified during the 2nd part of the inventory (planned for 2017), and potentially more as a result of Agrocalidad/Magap/Police monitoring operations. The GoE also expects to have a number of pesticide contaminated sites which currently are not being properly managed/addressed. Although pesticide distributor associations have started initiatives for the collection of empty pesticide containers, only 40% is being collected/disposed, leaving an additional 2,135 tonnes (by 2019) inadequately disposed of. Barriers to improve the management of obsolete (POPs) pesticides include a lack of suitable solutions for sound management and disposal; outdated guidelines for the management of obsolete pesticides and contaminated sites; limited capacity and technical knowhow for contaminated site remediation and low recycling/treatment capacity for empty pesticide containers which might result in UPOPs releases.

Unintentionally produced POPs: The 2016 PPG baseline assessment, using the UNEP UPOPs Toolkit and data as recent as Nov. 2016, identified the most relevant sources of UPOPs in Ecuador: Medical waste incineration (48.19 g-TEQ/yr); Landfills, Waste Dumps and Landfill Mining (16,74 g-TEQ/yr); Household Heating and Cooking – Biomass (13,36 g-TEQ/yr); Waste Burning and Accidental Fires (7.14 g-TEQ/yr); Iron and Steel Plants (6.25 g-TEQ/yr); Biomass Burning (5.35 g-TEQ/yr); and Biomass Power Plants (1.15 g-TEQ/yr). The sectors combined represent 98% of UPOPs releases (values taken from POPs expert report made for PPG phase, see Annex L). The main barriers in these sectors to reduce UPOPs release are a lack of technical capacity and know-how on which Best Environmental practices (BEP) and Best Available Technologies (BAT) are the best for various sector to introduce, limited capacity and technical knowhow for UPOPs contaminated site remediation and a lack of financial and industry incentives that support conversion to cleaner processes.

POPs in products: The 2016 PPG baseline assessment (values taken from POPs expert report made for PPG phase, see Annex L) looked into which new POPs would be the most likely to be contained in import products. The assessment concluded that PFOs and c-octaBDE[6] (potentially contained in products like ABS, high impact

[6] c-octaBDE (commercial octabromodiphenyl ether) is a mixture of several polybrominated diphenyl ethers and congeners. In addition to octaBDE isomers, c-octaBDE contains significant amounts of other component groups, such as pentabromodiphenyl (pentaBDE) and hexabromodiphenyl ethers – which are both listed under the Stockholm Convention.

polystyrene with ABS, treated leather, etching agents, ferric chloride, aviation hydraulic fluids, insecticides and flame retardants) could be considered national priorities. However, the GoE currently faces challenges in identifying POPs in products, strengthening import procedures, identifying and introducing POPs-free alternatives, creating capacity to conduct cost-benefit analyses (CBAs) to make the case for phase-out, improving the capacity of entities managing these types of products/wastes and supporting the implementation of a strengthened regulatory and policy framework to support phase-down.

Life-Cycle Management of Chemicals (LCM): To further improve the holistic Life-Cycle Management of chemicals of concern (rather than limiting its focus on specific chemicals like POPs and Hg issues) the GoE needs to overcome a number of barriers that prevent a holistic approach to chemicals management, these include: low awareness of stakeholders on chemicals issues, limited monitoring capacity of institutions with responsibilities pertaining to the LCM of chemicals, limited coordination between key chemicals actors, limited knowledge of how to carry out cost-Benefit Analysis (CBA) and Cost of Inaction (CoI) assessment for chemicals of concern, and too little financial/industrial incentives for introducing conversion to processes which pose less risks and result in less harmful products.

The Constitution of the Republic (Article 14) recognizes the right of the population to live in a healthy and ecologically balanced environment that guarantees sustainability and wellbeing. Article 15 prohibits the development, production, holding, marketing, import, transport, storage and use of highly toxic persistent organic pollutants (POPs) and internationally prohibited agrochemicals, Article 66 of the Constitution recognizes and warrants the people the right to live in a healthy and ecologically balanced environment, free of pollution and in harmony with nature. Under this context, the sound management of chemical substances that affect the health and wellbeing, not only of people but of ecosystems and biodiversity in general, is a priority duty and responsibility of the State.

SDGs: Improving the sound life-cycle management of chemicals and in particular the management of POPs and Hg will help the GoE to work towards achievement of the Sustainable Development Goals (SDGs). The SDGs most relevant to this project are SDG 1 (Poverty) by improving the income of poor communities relying on ASGM; SDG 3 (Health) protecting local, regional and global populations from the health impact of hazardous chemicals; SDG 6 (Water) protecting water resources from contamination; SDG 8 (Decent work) improving the work environment to protect miners and waste/industrial workers from health and safety risks; SDG 9 (Industry) supporting industry in reducing its harmful releases; SDG 12 (sustainable consumption) phasing out products containing harmful substances; SDG 14 (Life below water) safeguarding marine life from exposure to hazardous chemicals and wastes; SDG 15 (Life on land) reducing environmental degradation from ASGM; and, SDG 16 (Peace) safeguarding the relationship with neighboring countries over trans-boundary pollution from land-based activities.

II. STRATEGY

This section explains the detailed Theory of Change (ToC) for this project (see Figure 1) and what UNDP and partners will do to address the development challenge described in the section above. The project's approach will be explained in detail, including how it will lead to change, why this approach is thought to be the best one at this time, and the key project assumptions that are critical for achieving the expected change.

LCM of chemicals: The project aims to protect human health and the environment by adopting the environmentally sound and LCM of chemical substances in Ecuador. Although the project has a specific focus on POPs and Hg, the larger objective of the project is to increase national capacity to manage all chemicals of concern in a sound manner and ensure the GoE has the capacity to develop, improve and operationalize the regulatory and policy framework for the LCM of chemicals and wastes, and promote the use of safer products and chemicals processes through incentives and regulatory measures. In order to achieve this, the project will support 12 public and private entities (incl. 2 laboratories) in building their capacity to address chemicals of concern (this include support to customs, emergency response units, monitoring systems, how to conduct Cost-Benefit-Analyses (CBAs) and Cost-of-Inaction (CoI) assessments to inform the actions government would need to take to address chemicals of concern). Furthermore, the project will improve coordination among entities that have responsibilities in the area of chemicals management through the establishment of an Inter-Agency Coordinating Mechanism (ICM), and support the development of policies, regulations, guidelines and standards to help achieve the LCM of chemicals. As such the project will build capacity that will last beyond the duration of the project and can be applied to all chemicals of concern, not just POPs and Hg.

Incentives: To complement the strengthening of government capacity in the Sound Management of Chemicals (SMC) and the regulatory and policy framework, the project envisages developing new (financial) incentives that would encourage entities and sectors to adopt cleaner processes and reduce pollution. Such (financial) incentives would continue to encourage changes long after the project has come to an end and would ensure sustainability of project results. Incentives that are foreseen under the project are the development of 2 industry incentives for cleaner processing and the development/revision of a financial banking product to serve the ASGM sector. Although the banking sector in Ecuador currently serves the precious metal mining sector (although in a limited manner), the proposed project's approach is considered innovative as the financial banking product envisaged seeks to stimulate the formalization and association of miners (in particular women and youth) and women entrepreneurship in the ASGM sector. In addition, the project plans to establish a Competitive Fund Mechanism (CFM) that replaces direct granting to production and processing facilities. Entities will be expected to apply for funding through the CFM. This approach – used in Ecuador in the "*Adaptation to Climate Change through Effective Water Governance (PACC)*" project as well the "*Sustainable Financing of Ecuador's National System of Protected Areas (SNAP) and Associated Private and Community-managed PA Subsystems*" project, has proven that only the most committed entities apply for funding, own the conversion process more and are more successful in introducing better practices. The project will not only help set-up these incentives and products but will also support project partners in using these incentives (including existing tax incentives in addition to the incentives mentioned above) to finance the conversion of their production processes.

Reduce Hg use in ASGM: The project will focus its interventions on the country's main gold mining and ore processing areas (Portovelo-Zaruma, Ponce Enriquez and Chinapintza), were most of the country's mineral processing is concentrated and most river discharges of contaminated mine occur. The project will focus its effort on so called "chanchas" as these are considered the worst polluters and many artisanal miners rent these facilities to process their ore, making these plants a good place to focus interventions seeking change and a point to connect with artisanal miners and disseminate information to them. Past experiences have shown that Hg health hazards are not a driver for miners to change practices, therefore the project aims to provide comprehensive training of miners focusing on better gold recovery, progressive elimination of mercury use and technology transfer (incl. aspects related to ore analysis, legislation, formalization, access to finance/existing financial incentives, tailing management, site remediation, among else). Practical training will be provided using a staffed mobile training plant that can be temporarily installed at various locations allowing for easily accessible and longer-term training opportunities. The mobile training plant would allow miners to manipulate their own ore or

witness parallel experiments using their ore with traditional and alternative techniques, making a more convincing case than receiving theoretical training.

In addition, making use of the incentives described above and supporting facilities in accessing and applying these incentives, the project will support gold processing plants (at least 2 occasionally used by women) in improving their ore processing; support 3 mining groups (of which 1 containing women miners) in their formalization processes; and develop a partnership/agreement with legal gold buyers to allow ASGM miners to sell responsibly produced gold at a higher price. In summary, the project supports access to finance, formalization efforts, miner training on all aspects related to ASGM, and access to buyers shortening the supply chain. Especially the access to finance and access to buyers is considered an innovative aspect of this project.

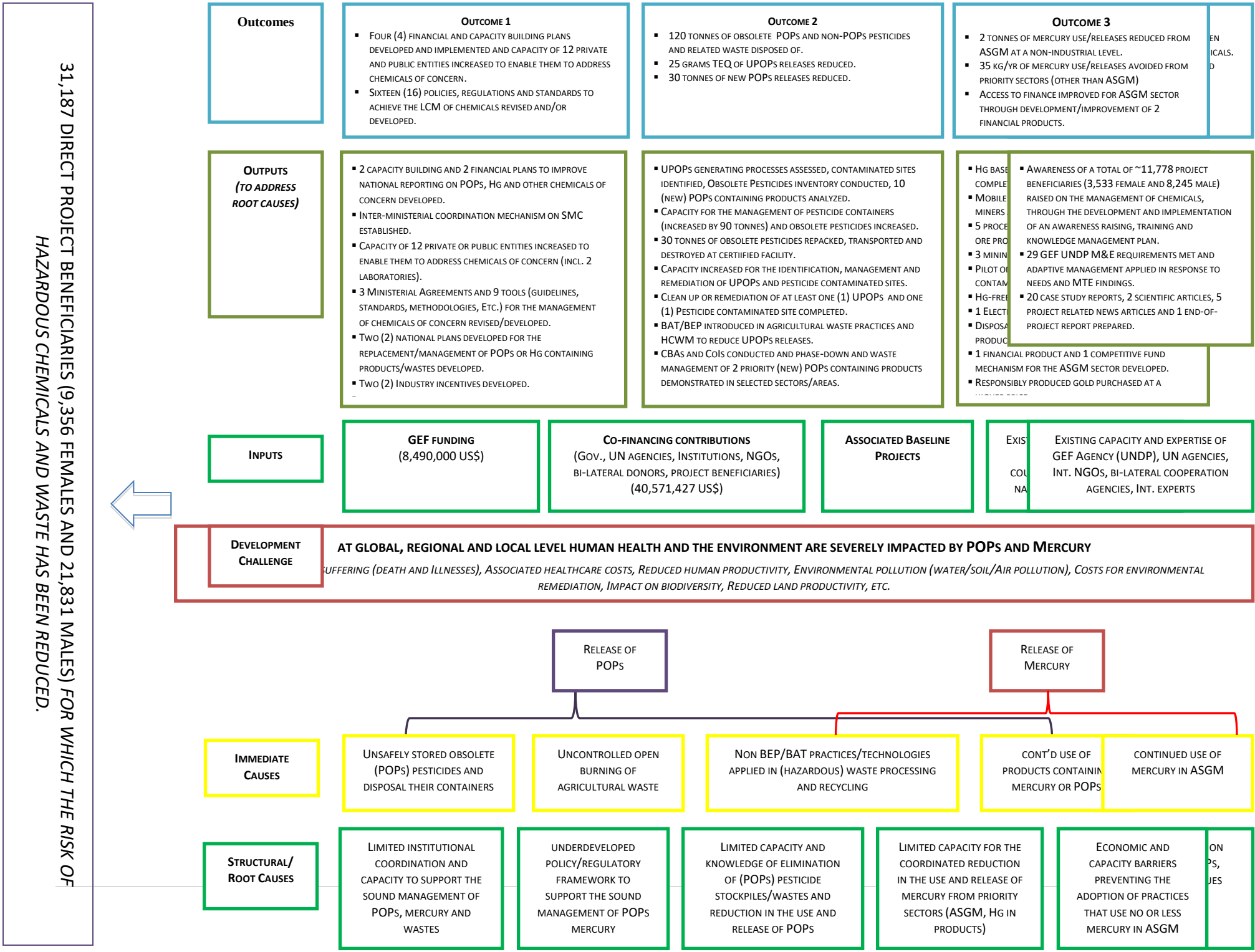
Reduce the use of POPs and Mercury containing products: Phasing out products containing Hg or POPs can make a significant contribution to reducing their releases and avoids the generation of wastes that are complicated and costly to manage. The project will help build the capacity of public/private sector partners in phasing-down/out POPs/Hg containing products by supporting import product analysis, the identification of cost-effective and suitable alternatives, training on how to conduct CBAs and CoIs to inform phase-down/out decisions, demonstrating the phase-down/out of a number of priority POPs and Hg containing products and supporting the disposal of POPs/Hg containing products. Capacity building will focus on Hg and POPs containing products, however, expertise obtained can be applied to any product that contains chemicals of concern. Although the phase-down of Hg-containing products has been demonstrated previously in the Ecuador and abroad, the phase-down of new POPs containing products is considered relatively innovative.

Management of (POPs) obsolete pesticides and associated wastes: The project's approach is to work very closely with various agricultural government entities and pesticide distributor associations to build long-term capacity for the sound management and disposal of obsolete pesticides, associated wastes (pesticide containers) and contaminated sites. The project will build on an initiative between AGROCALIDAD, APCSA and INNOVAGRO, which undertook a partial obsolete pesticide inventory in 2016 and will launch efforts to complete the inventory in 2017. The project will support this inventory by training people on how to conduct a POPs/obsolete pesticide inventory, raising the awareness of 2,400 farmers/farms/distributors on the reporting, management and disposal of obsolete pesticides, train a local transportation company and personnel of (centralized) storage facilities in the safe repacking and transportation of obsolete pesticides, and demonstrate the collection, transportation and sound disposal of these obsolete pesticides. In addition, building on another APCSA and INNOVAGRO initiative, the project aims to support an increase in the capacity for the cleaning, collection, and disposal/recycling of empty pesticide containers, by assessing the practices of a pesticide container recycling facility and pesticide container-rinsing facilities and subsequently providing recommendations to reduce their environmental impact and introduce BEP/BAT practices. In addition the project will provide equipment to APCSA and INNOVAGRO that reduces the volume of pesticides containers and allows for an increase in the collection and treatment/recycling of containers. Finally, the project will also assess contaminated sites, demonstrate clean up or remediation of at least one pesticide contaminated site and based on the results develop guidelines for the identification, management and remediation of pesticide contaminated sites. Although the inventory and disposal of obsolete pesticides and the decontamination of contaminated sites has been demonstrated around the world, the recycling and disposal of empty pesticide containers is quite innovative and lessons-learned and experiences from Ecuador will be much appreciated by countries struggling with the disposal of pesticide containers.

Reduction of UPOPs releases: Introducing BEP/BAT technologies and practices in the waste treatment sector and the recycling industry would result in important UPOPs release reductions, however this is a costly endeavor. Therefore the project aims to support baseline assessments at 7 priority UPOPs generating facilities (some of which might also have contaminated sites), make available to these facilities recommendations for BEP/BAT interventions and ultimately support 2 project sites/facilities introducing BEP/BAT (making use of the existing tax incentives), while generating lessons/learned for other entities to replicate. The project will also demonstrate the clean up or remediation of at least one (1) UPOPs contaminated site and based on the results develop guidelines for the identification, management and remediation of UPOPs contaminated sites.

Awareness-raising: Awareness raising on the importance of the LCM of chemicals is key to the project's approach. The project will raise the awareness of 11,778 people on SMC through several media channels, while all project experiences will be captured in case study reports, for easy dissemination and replication purposes.

Figure 1. Theory of Change (ToC)



III. RESULTS AND PARTNERSHIPS

For details on the project outputs please refer to the multi-year work plan in Annex A.

i. Expected Results:

PROJECT OBJECTIVE: TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT BY ADOPTING THE ENVIRONMENTALLY SOUND AND LIVE CYCLE MANAGEMENT OF CHEMICAL SUBSTANCES IN ECUADOR.

Objective indicators: There are a number of targets the project is going to work towards to achieve the project's overall objective (in addition to the outputs and results that will be achieved through the four (4) project component). These include:

- *Establishing at national level 2 new partnership mechanisms with funding for sustainable management solutions for chemicals and waste*. These partnership mechanisms will be established as part of project component 3 to enable the achievements of the project's various project outputs and targets. The signing of Memoranda of Understanding (MoUs) between the project and project partner(s) will make these partnerships official.
- *Creation of 80 new jobs* (24 for females and 56 for males) through solutions for the management of chemicals and waste. These jobs will primarily be created through project activities such as consultancies, the establishment of the Competitive Funding Mechanism (CFM), and jobs created for the operation and maintenance of plants supported by the project.
- *Reduce the risk of hazardous chemicals and waste for 31,187 direct project beneficiaries* (9,356 of females and 21,831 of males). Direct project beneficiaries will include those trained by the project (~706) and their families, the people reach by the communications campaign (2,400) and their families, people working in the ASGM sectors in the project's three mining sites (~14,100) and people living in close proximity to contaminated sites who will benefit from their remediation.

PROJECT COMPONENT 1/IMMEDIATE OUTCOME 1: STRENGTHEN INSTITUTIONAL CAPACITY AND THE REGULATORY AND POLICY FRAMEWORK FOR THE SOUND MANAGEMENT OF CHEMICALS (SMC) BASED ON A LIFE-CYCLE APPROACH.

This project component aims to increase the capacity of the Government of Ecuador to improve the life-cycle management of chemicals in general, with a particular focus on the management of Hg and POPs. This component aims to build capacity for SMC, through interventions that will benefit the management of Hg and POPs, but which can equally well be applied to the management of other chemicals of concern.

Outcome Indicator 1.1: Four (4) financial and capacity building plans developed and implemented and capacity of 12 private or public entities increased to enable them to address chemicals of concern

The main outputs for this outcome indicator include:

1.1.1 *Development of 2 capacity building plans and 2 financial plans to improve the national reporting on statistics/indicators for POPs, Hg and other chemicals of concern*. The capacity building plans intend to increase capacity for environmental risk assessments, monitoring and reporting on POPs and Hg and management of other chemicals of concern (including sources, imports, use, product design, releases, prevention-awareness, health issues, alternatives BEP/BAT, emergency management, etc.) and ensure that this type of reporting is embedded in existing monitoring and reporting systems. The proposed financial plans (which accompany the capacity building plans) will present the financial allocations necessary for the implementation of the capacity building plans.

1.1.2 *Interagency Coordinating Mechanism (ICM) and its working groups established to improve coordination, collaboration and decision-making on issues pertaining to SMC*. ICM and working group members will be

trained on LCM of chemicals. The establishment of 4 working groups i) UPOPs, ii) POPs and Hg in Products, iii) Pesticides, iv) ASGM) are foreseen.

1.1.3 *Capacity built of 10 institutions to improve the monitoring of chemicals of concern, Hg, POPs and products containing POPs and Hg through tailored training workshops*. Workshops will focus on the training of inspectors (how to implement the new norms, regulations or technical guidelines developed by the project); early warning systems and emergency response procedures; how to conduct a Cost-Benefit Analysis (CBA) and Cost of Inaction (CoI) assessment for priority chemicals and C&W monitoring; good pesticide management practices, among others training subjects.

1.1.4 *Capacity of two (2) analytical laboratories increased enabling them to comply with the National Accreditation Service requirements*. This intervention will encompass an assessment of laboratory capacity, which will be followed by the development and implementation of capacity building plans for 2 analytical laboratories. The implementation of these capacity building plans will focus on developing capacity for the analysis of hazardous substances and wastes in environmental media and biological samples, and support will include the provision of analytical equipment for the analysis of hazardous substances targeted by the project. Project support will furthermore include assistance for applicable accreditation.

Outcome Indicator 1.2: Sixteen (16) policies, regulations and standards to achieve the LCM of chemicals revised and/or developed

1.2.1 *Three (3) Ministerial Agreements (MA) and their application guides, to address the LCM of Chemicals revised and/or developed and submitted for approval*. MAs will focus on i) addressing POPs and Hg in products; ii) UPOPs and iii) establishment of the ICM and its working groups.

1.2.2 *Nine (9) tools (guidelines, standards, methodologies, etc.) for the management of chemicals of concern revised/developed*. Guidelines that the project aims to develop could include (in response to the needs of MAE at the moment of project implementation): BEP/BAT for medical waste treatment to reducing UPOPs releases; Identification, use, production and assembly, safe storage, packaging, transportation, data management, inspection/monitoring and final disposal of POPs-containing wastes and products; Identification, safe storage, packaging, transportation, data management, inspection/monitoring and final disposal of Hg-containing wastes and products; management and phase-out of mercury containing products in the health and lighting sector; management of obsolete pesticides; identification, management and remediation of POPs/UPOPs contaminated sites; management of solid and liquid waste and air emissions generated by gold/ore processing plants; Maximum Permissible Limit standard for the discharge of effluents and sludge products from mineral processing activities; preparation of a mine closure plan.

1.2.3 *Two (2) national plans developed for the replacement of POPs or Hg containing products and the management of POPs or Hg containing wastes*. The development of these national plans will be based on project outputs achieved as part of component 2 (2.3) and 3 (3.2).

1.2.4 *Two (2) Industry incentives developed and proposed for implementation that support conversion to processes which pose less risks and result in less harmful products*. The project will support the establishment of financial mechanisms that promote the adoption of integrated environmental management and cleaner production in production processes in order to increase production efficiency, prevent the generation of wastes and reduce risks and impacts to the population and the environment. These incentives could include: concessional loans for the conversion to cleaner production, small grants for the establishment of pilot processing plants, tributary benefits, accelerated depreciation tax benefits, fund for technological innovation in mining, among others.

PROJECT COMPONENT 2/IMMEDIATE OUTCOME 2: ELIMINATE POPS STOCKPILES AND REDUCE THE USE AND RELEASE OF INITIAL AND NEWLY LISTED POPS (INCLUDING THOSE CONTAINED IN PRODUCTS).

Outcome Indicator 2.1: 120 tonnes of obsolete POPs and non-POPs pesticides and related waste disposed of.

2.1.1 *One (1) in-depth inventory (incl. characteristics of the impacted (work) population and gender dimensions) of "old" and "new" POPs pesticides, non-POPs pesticides, pesticide contaminated sites and storage facilities completed in partnership with AGROCALIDAD/INNOVAGRO and APCSA.* In preparation for the inventory, sixty (60) people will be trained on how to conduct a POPs/obsolete pesticide inventory and an awareness raising campaign will be conducted targeting 2,400 farmers/farms/distributors on the reporting, management and disposal of obsolete pesticides (to support obsolete pesticide inventory). This Output will build on the AGROCALIDAD inventory of 2016 and rely on the anticipated 2017 AGROCALIDAD inventory.

2.1.2 *At least 30 tonnes of obsolete pesticides repacked, transported and disposed of at a licensed treatment/disposal facility.* The project output will rely on the signing of an agreement with a state institution that will be responsible for identifying and making available to the project a temporary storage facility for POPs and non-POPs pesticides. The project will launch a Request for proposals (RFP) for the collection, transportation and treatment/disposal of 30 tonnes of obsolete pesticides, assess the bids and select the most suited collection/transportation and treatment entity. One local transportation company and personnel (30% women and 70% men) of four (4) centralized temporary storage centers[7] will be trained in the safe repacking and transportation of obsolete pesticides.

2.1.3 *Clean up or remediation of at least one (1) pesticide contaminated site completed.* The project will assess the facilities of 4 large pesticide-related companies[8] to identify potentially contaminated sites and assess container-rinsing facilities. Recommendation to reduce environmental impact from pesticide container rinsing will introduced at one (1) pesticide related company. At least one (1) pesticide contaminated site will be selected for clean up or remediation. After laboratory analysis of the type and level of contamination a cleanup or remediation plan for the contaminated sites will be developed and approved. A RFP will be launched for the cleanup or remediation of at least one (1) pesticide contaminated site, and one entity selected for the site's cleanup/remediation.

2.1.4 *Empty pesticide container collection, transportation, recycling and disposal increased by 90 tonnes*. Building on APCSA and INNOVAGRO initiatives, which collect empty pesticide containers from their members for recycling and disposal, this project output will further increase capacity to collect and treat an additional 90 tonnes by procuring shredding and compacting equipment as well as training 30 APCSA and INNOVAGRO staff in the use of the new equipment.

Outcome Indicator 2.2: 25 grams-TEQ of UPOPs releases reduced

2.2.1 *Assessment of UPOPs generating processes completed at seven (7) facilities (including 5.500 hectares of agricultural lands)*. Thirty (30) people will be trained on how to conduct UPOPs baselines and measure UPOPs reductions who will in turn conduct UPOPs assessments at one (1) GAD landfill, two (2) of the country's most polluting incinerators/recycling facilities, one (1) pesticide container recycling facility, two (2) medical waste treatment facilities and agricultural burning practices of 5.500 rice/sugarcane/corn hectares.

2.2.2 *Recommendations prepared for BEP/BAT interventions at seven (7) facilities*. Based on the UPOPs assessments conducted as part of 2.2.1, recommendations for BEP/BAT interventions will be prepared for all the seven (7) assessed facilities.

2.2.3 *BEP/BAT introduced to reduce UPOPs releases at two (2) project sites/facilities.* The selected facilities for BEP/BAT introduction will most likely include one (1) public medical waste treatment facility and one (1) agricultural waste pilot project.

2.2.4 *Clean up or remediation of at least one (1) UPOPs contaminated site completed*. Based on the outcomes of output 2.2.1, at least one (1) UPOPs contaminated site will be selected for clean up or remediation. A clean up or remediation plan(s) for the contaminated site(s) will be developed and approved, and through

[7] APCSA has 4 and INNOVAGRO has 2 temporary centralized storage facilities for plastics contaminated with agrochemicals. All of them have environmental permits. These temporary storage facilities could be used by the project for the temporary storage of obsolete pesticides before disposal. INIAP, MAGAP and UNA temporary storage facilities could also be considered.

[8] Aerial spraying and terrestrial spraying sites or old storage sites belonging MAGAP, Agrocalidad, INIAP, MSP, or others.

a RFP an entity will be selected to carry out the clean up or remediation of the selected site (most likely a site linked to waste incineration/recycling).

Outcome Indicator 2.3: 30 tonnes of new POPs releases reduced

2.3.1 *Ten (10) imported products suspected of containing new POPs (PFOs/c-octaBDE[9]) analyzed to verify the existence of new POPs*. Thirty (30) people will be trained on how to conduct baseline assessments for new POPs and measure the new POPs reductions achieved by the project. Focus will be on import products containing PFOs and C-octaBDE (e.g. ABS, high impact polystyrene with ABS, treated leather, etching agents, ferric chloride, aviation hydraulic fluids, insecticides and flame retardants). 10 products suspected of containing new POPs (PFOs/c-octaBDE) will be analyzed to verify the existence of new POPs.

2.3.2 *A Cost-Benefit Analysis and Cost-of-Inaction assessment conducted (incl. identification and quantification of differentiated social benefits and costs between women and men) to inform the selection of alternatives and waste management/treatment options for the top 2 priority POPs containing products*. Based on the outcomes of the product analysis conducted as part of 2.3.1, the top two (2) products of concern will be selected for further assessment and will be the subject of CBAs and CoIs assessments to inform the selection of alternatives and waste/management treatment options. A list of potential alternatives will be identified (incl. assessment of the costs and benefits of alternatives during their life cycle) and made widely available.

2.3.3 *Phase-down (with SENAE) and waste management of top two (2) priority POPs containing products demonstrated in selected sectors/areas.*
Based on the outcomes of 2.3.1 and 2.3.2 the phase-down and waste management of the top two (2) priority POPs containing products will be demonstrated in a selected sector/industry or area in partnership with SENAE (to improve import control).

PROJECT COMPONENT 3/IMMEDIATE OUTCOME 3: IMPLEMENTATION OF MEASURE FOR REDUCTION AND ELIMINATION OF HG FROM PRIORITY SECTORS

Outcome Indicator 3.1: 2 tonnes of mercury use/releases reduced from ASGM at a non-industrial level.

3.1.1 *Comprehensive mercury baseline assessment completed for all ASGM project sites at a non-industrial level.* Six (6) people will be trained in how to undertake pre-project Hg baselines assessments; measure post-project Hg reductions for all projected project interventions, and measure the participation, empowerment and improvement of work/living conditions of men/women. The Hg baseline assessment, which will also obtain sex disaggregated and gender specific data, will be completed for all three (3) ASGM project sites (Camilo Ponce Enríquez, Portovelo and Chinapintza).

3.1.2 *Mobile training plant installed at "home base" location and operationalized*. The project will identify locations where a mobile training plant can be temporarily installed, and look into permitting requirements for long/short-term installation. A Memorandum of Understanding (MoU) will be drawn up by the project and signed with the entity/organization that will host the mobile plant (if required) to lay out responsibilities. Technical specifications for the mobile training plant equipment will be prepared and equipment/spare parts for the mobile training plant procured. The mobile training plant will be installed and used for training in at least all of the 3 project locations. The entity that will host the mobile plant will be responsible for its operation and maintenance.

3.1.3 *350 ASGM miners and mining communities trained (of which at least 30% are women, and 5% are indigenous)*. Training materials and awareness raising materials (e.g. posters, training videos) for the capacity building of Artisanal and Small Scale miners will be prepared. Training materials will be made available through existing knowledge exchange platforms[10]. 10 trainers (including 2 semi-permanent on-

[9] c-octaBDE (commercial octabromodiphenyl ether) is a mixture of several polybrominated diphenyl ethers and congeners. In addition to octaBDE isomers, c-octaBDE contains significant amounts of other component groups, such as pentabromodiphenyl (pentaBDE) and hexabromodiphenyl ethers – which are both listed under the Stockholm Convention.

[10] For example – the Knowledge Management platform to be established for GEF GOLD (to be established), Swiss ASG – IKH (to be established)

site ASGM experts) will be trained to support the operation of the mobile training plant, conduct monthly training events and assist processing plants in introducing gravimetric concentration methods. The 10 trainers will train the 350 ASGM miners and mining communities through monthly training events in ore analysis, recovery of minerals by gravimetric concentration methods, legislation, formalization, access to finance/existing financial incentives, tailing management, site remediation, among else. The quality of training will be assessed by conducting exit polls for each training event.

3.1.4 *At least 5 processing plants (at least 2 occasionally used by women) supported in improving their ore processing*. The project will identify and select 5 mining operations/plants that are located in the project's priority locations and that are interested in participating in a business case analysis (including mineralogical testing) to identify potential financial gains and improving their ore processing. Prior to supporting the five (5) processing plants in improving their ore processing (e.g. introduction of gravimetric concentration methods, improved tailings and water management, among other interventions), the project will conduct an assessment on sound ways to dispose of mining tailing produced by processing facilities supported by the project.

3.1.5 *At least 3 mining groups (of which 1 containing women miners) supported in their formalization processes.* The project will provide tailored support to women miners (Jancheras) to improve ore processing, which will include helping women's mining groups in exchanging experiences in ASGM. The project will also identify mining groups in each of the project's location interested in formalization (or in the process of formalization) and support at least 3 mining groups (of which 1 containing women miners) in their formalization processes.

3.1.6 *Demonstration pilot focusing on gravity recovery of Hg from contaminated tailings implemented.* The project will carry out a tailing site characterization and analysis prior to selecting a Hg contaminated tailing site. Subsequently the project will demonstrate how to use gravity recovery of Hg from contaminated tailings.

Outcome Indicator 3.2: 35 kg/yr of mercury use/releases avoided from priority sectors (other than ASGM)

3.2.1 *Comprehensive national mercury baseline assessment (including identification of types of mercury containing products in use) completed for medical devices and lighting products, and assessment conducted on impact on women/men*. The project will develop guidance for the identification of medical and lighting products containing mercury and the quantification of waste generated containing Hg. It will train fifteen (15) people on how to undertake a baseline assessment for Hg containing products and record post-intervention Hg reductions achieved by the project. The project will also develop a software module which will be able to capture the baseline information obtained with project support.

3.2.2 *List of available alternatives for Hg containing medical devices and Hg containing lighting products identified (incl. assessment of their costs and benefits)*. A list with cost-effective and available alternatives for Hg containing medical devices and energy saving lamps will be prepared and made available to project partners.

3.2.3 *Assessment concluded of existing disposal and treatment options (national/international level) for mercury containing products and their wastes*. A list with existing and vetted disposal and treatment options (national/international level) for mercury containing products and their wastes will be prepared and made available to project partners. This list will include disposal and treatment options for all products containing mercury, with a particular focus on mercury containing medical devices and lamps.

3.2.4 *A Cost-Benefit Analysis and Cost-of-Inaction assessment (incl. identification and quantification of differentiated social benefits and costs between women and men) conducted to inform the selection of mercury-free alternatives and waste management/treatment options*. This project Output will identify, by conducting CBAs and CoIs: i) the most cost-effective and sensible solutions in terms of alternatives for mercury containing products (medical devices and lamps); and, ii) the most cost-effective and sensible solutions/options for the management and treatment of mercury containing medical devices and lamps in Ecuador. The outcomes of this Output will inform Outputs 3.2.5 – 3.2.6 but also Output 1.2.3

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or http://artisanalmining.org/.

"development of a national plan for the replacement of Hg containing products and the management of Hg containing wastes."

3.2.5 *Phase-in of mercury-free alternatives piloted in 1 high profile HCF facility.* Three (3) HCF facilities located in the biggest cities in Ecuador will be selected to demonstrate the phase-out/down of Hg containing medical devices, based on selection criteria agreed upon with MSP. Hg baseline assessments will be completed for 3 project HCFs and their procurement practices for Hg containing and Hg-free products will be reviewed. 3 plans for the management and replacement of Hg containing medical products will be developed and adopted for each project HCF. Awareness raising (e.g. posters) and gender sensitive training materials will be developed for HCFs in partnership with the MSP and made widely available. Of the 3 facilities 1 will be selected to phase-in Hg-free alternatives with project support. This will be achieved through awareness raising, training (at least 50% of staff trained are women) and adapting procurement practices. This will include the evaluation and use of alternatives by healthcare staff, selection and procurement of Hg-free medical products and development of tailored product switch protocols.

3.2.6 Electricity sector pilot project implemented to support the phase-out and/or improved management of spent mercury containing lamps. Based on the results and outcomes of Outputs 3.2.1 – 3.2.4 the project will support a pilot activity in the electricity sector that will aim to support the phase-out and/or the improved management of mercury containing spent lamps. The pilot activity will be designed in such a way that it will support the electricity sector in complying with Minamata Convention requirements.

3.2.7 *The environmentally sound treatment/disposal of 10 tonnes of mercury containing waste products demonstrated*. The project will support the identification of ten (10) tonnes of Hg containing waste. Based on the outcomes of the assessment on existing disposal and treatment options at national and international level (output 3.2.3) a Request for Proposals (RFP) will be launched for the collection, transportation and treatment/disposal of 10 tonnes of Hg containing wastes. After bid assessment, an entity will be selected to demonstrate the collection, transportation and disposal of 10 tonnes of wastes.

Outcome Indicator 3.3: Access to finance improved for ASGM sector through development/improvement of 2 financial products.

3.3.1 *At least one (1) financial entity has developed/improved a product that serves the ASGM sector.* Based on the PPG financial mechanism assessment, the project will identify which financial entities would be best fit to participate in the project and select at least one (1) financial entity to participate in the project. Staff of the financial entity(ies) will be trained in the (re)design of financial products for the ASGM sector (30% of people trained are women) which includes soft criteria that promote the formalization and association of women/youth, the legalization of land, and women entrepreneurship in ASGM.

3.3.2 *One (1) competitive funds mechanism (CFM) established to finance five (5) environmental and social entrepreneurships and technology innovations within the ASGM sector.* The project will draft and approve a strategy for the establishment of a CFM (including soft criteria that stimulate innovative youth/women entrepreneurship and association and based on the GEF Small Grants Programme methodology and experiences/lessons learned) and the type of proposals that could be funded under the CFM. An application package (template for proposal, budget and supporting documentation) and monitoring and reporting procedures will be developed. Subsequently, information on the CFM funding opportunities will be disseminated at national level and sharing with project partners and stakeholders, and a call for applications will be posted. Two (2) organizations (with a focus on women-led entities/groups) will be supported to prepare their application for the CMF. Applications will be assessed from a technical and financial perspective and grants will be allocated to selected participants. Proposals will be implemented and activities reported on. The project aims to finance through the CFM five (5) environmental and social entrepreneurships and technology innovations within the ASGM sector.

3.3.3 *At least 2 plants (1 ASGM processing plants and 1 industry) have made use of existing tax incentives to finance cleaner production systems.* The project will identify 1 ASGM processing plant and 1 industry that are suitable to make use of existing tax incentives and subsequently support these in introducing cleaner technologies and in applying existing tax incentives in collaboration with the Tax Authorities.

3.3.4 *Responsibly produced gold (10 % produced by women) by a project beneficiary purchased at a higher price by a public or private legal buyer.* The project will undertake an assessment to identify opportunities for ASGM miners to sell responsibly produced gold at a higher price. The project will negotiate at least 1 agreement with legal gold buyers (Bank of Ecuador/refiners (*e.g. Archor*)/Int. initiatives (*e.g. ARM*).

PROJECT COMPONENT 4/IMMEDIATE OUTCOME 4: RAISE AWARENESS, ENSURE PROJECT MONITORING AND DISSEMINATE PROJECT RESULTS AND EXPERIENCES.

Outcome Indicator 4.1: 11,778 people (3,533 females and 8,245 males) of whom awareness has been raised on the sound management of chemicals.

4.1.1 *Awareness of a total of ~11,778 project beneficiaries (3,533 female and 8,245 male) raised on the management of chemicals*. The project will develop and implement an awareness raising, training and knowledge management plan that takes gender considerations/needs into account. As part of the plan's implementation, the project will establish and launch a project website/Facebook page/twitter account and develop and use gender sensitive awareness raising and training materials (e.g. web-based presentations, posters, videos), as part of Component 1, 2 and 3. In this manner the project aims to raise the awareness of ~11,778 people which include the families of trained government staff (working in sectors such as agriculture, electricity, health, environmental, industry, mines, customs, among others), and private individuals affiliated with the same mentioned sectors.

Outcome Indicator 4.2: 29 GEF UNDP M&E requirements met and adaptive management applied in response to needs and Mid-term Evaluation (MTE) findings.

GEF and UNDP M&E requirements include: 1 Inception Workshop Conducted and Report Issued; 5 PIRs completed/submitted; 1 audit completed *(frequency as per UNDP Audit policies*); 10 Project Board Meetings held; 5 Monitoring and supervision missions conducted; 1 Mid-Term GEF Tracking Tool updated; 1 Gender Assessment of project impact completed (as *part of MTE*); 1 Independent Mid-term Review (MTR) conducted (*translated into English*) and management responses submitted; 1 GEF Sec oversight missions conducted; 1 Terminal GEF Tracking Tool updated; 1 Independent Terminal Evaluation conducted (*translated into English*) and management responses submitted.

Outcome Indicator 4.3: 28 Case study reports, publications, presentations, (web-based) articles, etc. summarizing lessons-learned, best practices and experiences, disseminated at national, regional and global level.

The project will support the elaboration of at least 20 case study reports, which will capture results and lessons-learned from the main project interventions and in particular project demonstrations. The project will also prepare at least two (2) scientific articles, at least five (5) project related news articles and one (1) end-of-project report capturing all major project achievements and lessons-learned. The project will disseminate at national, regional and global level all project prepared materials and ensure that these materials are published on existing long-term KM hubs (e.g. *GEF GOLD KM hub*; http://www.artisanalmining.org/*(CASM)*; *Swiss funded ASM - IKH*).

ii. Partnerships:

Table 1: Partner Table

Name of stakeholder/ initiative	What is the stakeholder/initiative currently doing to address the development challenge?	What will be the role of the partner in project's implementation?	*What are the assumptions and expected results (to be) achieved by partners that are critical for the achievement of results of this project?*
Ministry of Environment **(MAE)**	National authority for environmental policies and regulations. Hosts GEF OFP, Stockholm, Minamata, Basel and Rotterdam Convention FPs. Implementing the National Program for the Integral Management of Solid Waste (PNGIDS); the Environmental and Social Repair Program (PRAS); Stockholm NIP update (UNIDO); Mercury Inventory Update; ZERO Mercury Plan; "Comprehensive environmental management program in the Puyango River Basin"; MAE/GEF/UNDP "Sustainable Development of the Ecuadorian Amazon: Integrated Management of Multiple Use Landscapes and High Value Conservation Forests"	▪ **Project Implementing Partner (Lead).** ▪ The Implementing Partner is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. ▪ Kindly refer to Section IX: GOVERNANCE AND MANAGEMENT ARRANGEMENTS for a detailed description of the role of the Ministry of Environment (MAE) in the project's implementation.	▪ MAE implements the 2nd phase of the RETCE platform and integrates it with SUIA and other public platforms to allow for the registration, reporting, management and control of POPs parameters (e.g. UPOPs, POPs, etc.). ▪ Interagency Coordinating Mechanism (ICM) and its working groups established to improve coordination, collaboration and decision-making on issues pertaining to SMC. ▪ 3 Ministerial Agreements and 9 tools (guidelines, standards, methodologies, etc.) for the LCM of Chemicals revised/developed and submitted for approval.
Ministry of Mining **(*incl. ARCOM, INIGEMM, ENAMI EP*)**	Ministry of Mining: Governing body of the mining sector, incl. public policies, mining regulations and the management of the mining sector; Development of the National Mining Sector Plan; Monitors compliance with the sector's objectives, policies and goals; Administers mineral resources. ARCOM: Agency for Mining Regulations and Control. INIGEMM: National Institute of Geological, Mining and Metallurgical Research (INIGEMM); ENAMI EP: National Mining Company. Implementing the CIRDI/MoM project "*Reducing Mercury Use and Release in Andean Artisanal and Small-Scale Gold mining*" and the MoM/INIGEMM project "*Improvement of working conditions of Small Scale and Artisanal Miners*."	Project Responsible Party for mining sector related activities under Component 3. Kindly refer to Section IX: GOVERNANCE AND MANAGEMENT ARRANGEMENTS for a detailed description of the role of the Ministry of Mining (MoM) in the project's implementation ▪ Support the reduction of 2 tonnes of mercury use/releases from ASGM at a non-industrial level. ▪ Support the identification of mining groups interested in formalization, or in the process of formalization. ▪ Support the identification and selection of 5 mining operations/plants to improve ore and tailings processing at 5 processing centers. ▪ Support the development, validation and dissemination of ASGM training and awareness raising materials and training	▪ It is assumed that although the Ministry of Mining, ARCOM, INIGEMM and ENAMI EP represent government partners, mining communities and groups are nevertheless willing to participate in events and capacity building supported by national partners. ▪ A Comprehensive mercury baseline assessment has been completed for all ASGM project sites with MoM/INIGEMM/ARCOM's blessing and support. ▪ Involvement of MoM/ARCOM/INIGEMM has facilitated obtaining permits from MAE for short/long-term installation of the project's mobile training plant. ▪ Involvement of MoM/INIGEMM/ARCOM has facilitated/supported the training of 350 miners, and formalization processes of 3 mining groups.

		of 350 miners.	
Ministry of Public Health **– MSP (*incl. INSPI, ARCSA and CIATOX*).**	Ensures and regulates the planning, coordination, control and management of the Ecuadorian Public Health sector through governance, health surveillance and control. Presented in 2015 draft guidelines for the management of mercury containing wastes in healthcare establishments.	▪ Components 2 and 3: ▪ Support selection of HCF and HCW incineration facilities; ▪ Support demonstration of phase-out/down of mercury devices and UPOPs release reductions.	▪ Provides data on medical waste incineration, use of Hg containing medicals devices, health incidents etc. ▪ Actively supports the identification of Hg-free alternatives and conduct a CBA/CoI assessment to inform the selection of alternatives and WM options. ▪ Actively supports and facilitate the development and approval of national guidelines for the management and phase-out of mercury containing products.
Ministry of Agriculture, Livestock, Aquaculture and Fisheries **– MAGAP (*incl. Agrocalidad*)**	Lead institution for the agricultural sector. Manages the agricultural chemicals registry; Responsible for the management of agrochemicals and pesticides; Manages pesticides as well as obsolete pesticides and monitors storage, distributors, shops, etc. MAGAP/Agrocalidad disposed of ~ 15.5 tonnes of obsolete pesticides with FAO support. In 2016, AGROCALIDAD inventoried ~600 sites and identified ~ 5 tonnes of obsolete pesticides.	Component 2: ▪ Inventory and disposal of 30 tonnes of obsolete POPs and non-POPs pesticides. ▪ Assessment of UPOPs generating agricultural practices (5.500 hectares) and recommendations for BEP/BAT interventions formulated.	▪ MAGAP/Agrocalidad/APCSA/INNOVAGRO are able to identify an additional 25 tonnes of obsolete pesticides during the 2nd part of the inventory (2017). ▪ MAGAP/Agrocalidad/CIATOX are able to obtain data on use of POPs pesticides. ▪ Pesticide users are willing to work with MAGAP/Agrocalidad to assess UPOPs generating agricultural practices, inventorize obsolete pesticide quantities, generation of empty pesticides containers, and assess potentially contaminated sites.
APCSA & INNOVAGRO **(*incl. 42 members*)**	APCSA: nonprofit organization (33 partners), aiming to improve the competitiveness of the Ecuadorian agriculture-sector. Implements the Integral Management Plan for Plastic Waste from Agricultural Use (2015 – 2019), aiming to dispose 600 tons of empty containers/yr by 2019. INNOVAGRO represents the biggest 9 agricultural inputs importers in the country. Has 2 temporary collection centers and aims to build 3 more. Aims to dispose 300 tons of empty containers/yr by 2019.	▪ Support inventory and disposal of 30 tonnes of obsolete POPs and non-POPs pesticides. ▪ Increase the collection, transportation, recycling and disposal of empty pesticide container by 90 tonnes. ▪ Support the assessment of pesticide rinsing areas/contaminated sites of members.	▪ APCSA and INNOVAGRO are able to increase the number of temporary storage/collection centers (TSC) in order to accomplish member goals for the collection of empty containers. ▪ Baling/shredding/compacting equipment procured by the project allows waste collection trucks engaged by APCSA/INNOVAGRO to make full capacity trips, increasing collection by 90 tonnes. ▪ APCSA/INNOVAGRO will cover costs associated with the disposal of the additional 90 tons of containers.
Financial Institutions/ Banks	Financial institutions/banks and similar structures (public and/or private) that (could) provide financial products for legalized miners and/or cooperatives.	▪ Participate in staff training in the (re)design of financial products for the ASGM sector. ▪ Develop/improve a financial product that serves the ASGM sector.	▪ At least one (1) financial entity has developed/improved a product that serves the ASGM sector and includes soft criteria that promote the formalization and association of women/youth, the legalization of land, and women entrepreneurship in ASGM.
Gold Buyers **(*e.g. Bank of***	Able to buy gold from legalized ASGM operations as well as mining groups that are in their formalization	▪ Develop and sign a partnership/agreement with the project	▪ Gold being produced by entities/miners who have received project support and who are producing gold

***Ecuador/refiners/ENAMI EP*)**	processes. E.g. Bank of Ecuador and its gold buying initiative; Refiners (e.g. Archor); International gold buying initiatives (e.g. ARM), ENAMI EP, etc.	or mining associations for purchasing legally and more responsibly produced gold.	in a more responsible manner (less or no mercury), can be purchased at a higher price by a public or private legal buyer.
Committee of Foreign Trade **(COMEX)**	Supports the development of norms and regulations related to import and export. Monitors mechanism prohibiting the distribution of Mercury for ASGM through any other distributors than those approved by Government.	▪ Support the revision/development of a Ministerial Agreement to address POPs and Hg in products (including import tariffs to discourage certain chemical containing products).	▪ Once import products have been analyzed, alternatives have been identified, CBA and CoI assessment have been conducted, and a national plan has been developed for phase-out, sufficient information is available to adopt a MA to reduce the import of Hg and POPs containing products.
Ministry of Electricity and Renewable Energy **(MEER)**	Entity responsible for meeting the electricity needs of the country through the formulation of relevant legislation, development plans and sectorial policies for the efficient use of resources; Responsible for the elimination of Mercury from electrical applications.	▪ Support development/dissemination of awareness raising materials. ▪ Support selection of 1 electricity company for Hg phase-down. ▪ Support formulation of management and phase-out/phase-down plan for mercury containing lighting products.	▪ If an enthusiastic electricity company is selected with the support of MEER, and MEER supports the general idea of phase-out of mercury containing lighting products and their waste management, the project will be able to identify, phase-out and dispose of 10 tonnes of mercury containing wastes.
Ministry of Industry and Productivity	Develop and implement public policies for the transformation of industrial specialization, generating favorable conditions for a Good Living standard.	▪ Support development/revision of guidelines, standards, methodologies and MA for the LCM of chemicals in industry. ▪ Support the development of 2 industry cleaner production incentives. ▪ Support identification of fitting industrial entities for project participation.	▪ Tax incentives and industry incentives are sufficiently enticing for industrial entities that these are being applied to finance cleaner production systems. ▪ Support provided by the Ministry and the project is sufficiently clear to make it easier for facilities to apply existing tax incentives and new industrial incentives.
Private Sector	Within the project's context, the private sector (one of the project beneficiaries) is considered to include hazardous waste facilities, pesticide distributors, farms, landfills, recyclers, electricity companies, gold processors, among others.	▪ Provide data on waste treatment volumes, known chemical related releases/uses/storage/disposal, chemicals management practices. ▪ Allow for the assessment of facilities, including surroundings.	▪ Tax incentives and industry incentives are sufficiently enticing for industrial entities that these are being applied to finance cleaner production systems and implement BAT/BEP recommendations made by the project.

iii. Stakeholder engagement:

As the projects aims to address a variety of processes, products and sectors in which hazardous chemicals are used, processed or released, the project's stakeholders and intended beneficiaries are varied and range from decision makers within government agencies to indigenous people working in gold mining in rural areas.

The table below summarizes the range of project beneficiaries/target groups the project aims to benefit and the ways in which the project aims to engage them.

Table 2. Type of intended project beneficiaries/target groups and ways in which the project will engage them

Stakeholder Description	Project involvement / affected by	Engagement strategy
Local communities, indigenous people, women, the poor, youth, vulnerable population groups, etc.	▪ Involved in ASGM (or ASGM related) activities. ▪ Relying on natural resources potentially polluted by waste management, ASGM, industry, etc. ▪ Living in close proximity to landfills, waste incinerators, obsolete pesticide storage facilities	▪ Reach out to local communities as part of the baseline assessments of project sites (e.g. landfills, incinerators, rice/corn/sugarcane plantations, pesticide (container) storage facilities, pesticide rinsing facilities, HCFs, etc.). ▪ Collect community data on the number of people (in)directly involved in the activity itself and (in)directly impacted by pollution from these sites/facilities. ▪ Inform communities about the scope of the project, how to protect themselves from hazardous chemicals and about the Stakeholder Response Mechanism. ▪ Raise awareness on the harmful effects of chemicals in processes and products, with a particular focus on ASGM. ▪ Train 350 predominantly informal miners (including 30% women and 5% indigenous populations) on how to improve gold recovery yields and reduce exposure to harmful chemicals. ▪ Increasing access to financing for artisanal miners (including women, youth) and creating awareness on the availability of these finance options. ▪ Selecting and supporting miners/mining groups (including women mining groups) in their formalization processes. ▪ Establishing partnerships to make access to legal gold buyers (and better gold prices) feasible and improve the livelihoods of miners.
General Public	▪ Buys and disposes of Hg and POPs containing products, is exposed to their harmful chemicals but is not yet aware of health hazards and available alternatives. ▪ Is being exposed to harmful chemicals contained present in air, water and food sources.	▪ Awareness raising campaign (news items, twitter, Facebook) on the harmful effects of priority chemicals (e.g. Hg in ASGM, medical devices and energy saving lamps, and POPs in certain products). ▪ Development and dissemination of information on alternatives to POPs/Hg containing products, as well as information on how to dispose of phased-out POPs/Hg containing products.
Project facilities/sites and their staff/workers (e.g. waste management facilities, landfills/incinerators), plantations, pesticide distributors, HCFs, etc.).	▪ Is being exposed at the source to harmful chemicals being emitted from certain practices and processes. ▪ Can play a direct role in reducing the release of chemicals by participating in interventions that reduce releases of harmful chemicals.	▪ Awareness raising on the harmful effects of Hg, POPs and harmful chemicals in products and their releases from certain processes/practices by conducted baseline assessment and sharing the results. ▪ Support the creation of (financial) incentives, ensure that information on their availability is disseminated and support project sites in applying for existing and new incentives. ▪ Engage facility staff in the selection of Hg/POPs-free alternatives or BAT/BEP that use/release less harmful chemicals. ▪ Engage facility staff in changing procurement practices.

		▪ Train facilities and their staff/workers in the use of alternatives and new technologies/practices. ▪ Support project facilities in introduction new BEP/BAT.
Government entities and agencies	▪ Strengthening of institutional capacity and the regulatory and policy framework pertaining to SMC.	▪ Awareness raising campaign ▪ Involvement in Interagency Coordinating Mechanism (ICM) and/or its 4 working groups. ▪ Development and implementation of capacity building plans for Gov. institutions (incl. laboratories) ▪ Jointly review/revise/develop regulatory measures/standards and incentives for cleaner production. ▪ Training. ▪ Signing of partnership agreements.
Financial Institutions/Bank	▪ Development of financial products to serve the ASGM sector.	▪ Awareness raising on the importance and potential of serving the ASGM sector and the sector's needs. ▪ Training.

Initial awareness raising activities targeted at project facilities and local communities that will be undertaken during the baseline assessments, will inform stakeholders about mechanisms to submit concerns about the social and environmental impacts of the project (e.g. through UNDP's Social and Environmental Compliance Review and Stakeholder Response Mechanism).

iv. Mainstreaming gender:

In daily life, men, women and children are exposed to different kinds of chemicals in varying concentrations. Biological factors – notably size and physiological difference between women and men and between adults and children – influence susceptibility to health damage from exposure to toxic chemicals. Social factors, primarily gender-determined occupational roles, also have an impact on the level and frequency of exposure to toxic chemicals, the types of chemicals encountered, and the resulting impacts on human health.

As such it is important to ensure that women's and men's concerns and experiences are included in the implementation, monitoring and evaluation of this project that aims to protect human health and the global environment from the impact of harmful chemicals.

During the Project Preparation Phase of this Chemicals and Waste project, a gender analysis (see Annex S) was conducted by a national gender expert. The gender analysis (centered on sex and gender variables), allowed for the identification of the different roles and tasks that men and women perform and that put them at risk of exposure to the various hazardous chemicals that are expected to be addressed by this project. The gender assessment also identified irregularities and power relations, inequities and inequalities and helped to recognize the causes of these inequalities.

Subsequently, based on the outcomes of the gender analysis, a gender strategy was formulated to help design project interventions that would help overcome gender related gaps, and provide insight on how these interventions would affect the results and sustainability of the project.

In order to produce a gender strategy and mainstream gender into the project, the following activities were undertaken:

- Mapping of current Government policies and commitments pertaining to environment and gender equality.
- A gender-specific analysis of the program's areas of intervention.
- An analysis of project activities and GEF requirements.
- Gender gaps, which could be influenced by the project, were identified.
- Activities that can reduce gender gaps were proposed.

- Specific gender indicators were included in the Project's Results Framework (PRF), while other PRF indicators were made gender specific.

As the gender strategy is too long to be incorporated in the project document, it has been attached in Annex S.

v. South-South and Triangular Cooperation (SSTrC):

South-South and Triangular cooperation will be extremely important for the success of this project, in particular for the ASGM project component. Even though the Ecuador project is not part of the GEF GOLD programmatic approach, the Ecuador project will do its utmost throughout implementation to ensure that experiences and expertise from the countries participating in GEF GOLD (Burkina Faso (UNIDO), Colombia (UNDP), Guyana (Conservation International), Indonesia (UNDP), Kenya (UNDP), Mongolia (UNEP/UNIDO), Peru (UNDP), and Philippines (UNEP/UNIDO)) will be applied to improve the project's success in Ecuador, while at the same time results, lessons-learned and experiences from the Ecuador project will feed directly into the GEF GOLD global component on communications and knowledge management (managed by UNEP). One of the ways UNDP will ensure South-South and Triangular Cooperation is by grouping all UNDP ASGM projects under one Regional Technical Advisor (Panama), and use (whenever feasible) project expertise from one ASGM project country in another (e.g. by exchanging international and national experts) to ensure coherence and transfer of know-how.

In addition to linking to the GEF GOLD programme, UNDP organizes on a yearly basis face-to-face South-South exchanges among all UNDP GEF Chemicals and Waste in the Latin American and the Caribbean region. These allow government counterparts, project coordinators and experts to exchange experiences and lead to long-term collaboration, exchanges and partnerships between projects and countries. Projects that participate in these exchanges include UNDP/GEF projects like those implemented in Colombia, Honduras and Uruguay (among others), which also focus on various POPs and Hg issues.

IV. FEASIBILITY

i. Cost efficiency and effectiveness:

The project is expected to deliver maximum results with available resources, using the following approaches:

- **Support the establishment of new cleaner production industry incentives and ASGM banking products**: The project does not have sufficient resources to support entire sectors (e.g. ASGM) to introduce cleaner processing practices. It is for this reason that the project aims to support at least 1 financial entity in developing/improving a product that serves the ASGM sector, and support the development of 2 industry incentives that encourage conversion to processes which pose less risks and result in less harmful products. In this manner, project resources applied are limited while the products developed can in turn assist many entities in introducing cleaner practices in the future.
- **Establish a Competitive Fund Mechanism (CFM)**: Instead of allocating grants to various production facilities, the project will work with a number of facilities (releases Hg) to assess their processes and make recommendations for BEP/BAT introduction. Subsequently it is up to the entities to apply for funding through the CFM. This approach – used in Ecuador in the PACC project as well the Sustainable Financing of Ecuador SNAP project, has proven that only the most committed entities apply for funding, own the conversion process more and are more successful in introducing better practices.
- **Supporting project partners in making use of existing tax incentives to introduce cleaner practices**: Instead of applying project funding, the project will support 2 plants to make use of existing tax incentives, and document this in case study reports for replication purposes.
- **Supporting a number of project partners' in assessing their processes but only demonstrating improved practices in a few** *(using financing listed above)*: The project does not have sufficient resources to support entire sectors (e.g. ASGM) to introduce cleaner processing practices. Instead the project aims to support a number of partners in assessing their current practices and preparing recommendations for the introduction of BEP/BAT to reduce releases of Hg and POPs, and subsequently support a smaller number (~16) processes/entities/sites in reducing POPs/Hg releases, making use of the financial mechanisms/incentives and funds listed above. This will allow for effective use of project funds and generate case study reports to be used by other entities to replicate successes.
- **Using a mobile gold processes plant for ASGM training purposes**: The mobile training plant can be temporarily installed in each of the project areas, bringing training solutions closer to mining communities, avoiding training travel costs, providing access to hands-on ore testing, increasing participation of miners that do not have the means or time to travel far for training, while also avoiding costs for permanent installation.
- **Supporting project partners in phasing-down/out POPs/Hg containing products and their wastes:** The project will build the capacity of public/private sector partners in phasing-down/out POPs/Hg containing products (incl. product analysis, identification of alternatives, training on how to conduct CBAs and CoIs, phase-down/out demonstration for a number of priority products). Phase-down/out of POPs/Hg containing products is considered the most cost effective way of minimizing releases.
- **Four (4) financial and capacity building plans for POPs/Hg management developed and implemented and the capacity of 12 private or public entities increased to enable them to address chemicals of concern. 16 policies, regulations and standards to achieve the LCM of chemicals revised and/or developed**: To ensure the sound management of chemicals and wastes over the long term, the capacity of private and public entities needs to be improved and the regulatory and policy framework needs to be sound. This is believed the most cost-effective way of using GEF financing.

ii. Risk Management:

As per standard UNDP requirements, the Project Manager will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probablity 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 PIR.

Table 3. Risk Table

Description	Type	I & P	Mitigation Measures	Owner	Status
Lack of coordination between relevant institutions/ministries as well as activities/programmes in the same focus areas as the project (e.g. ASGM).	Political	P = 1 I = 3	Coordination among the project's various stakeholders will be ensured by involving them in the project steering committee and/or in specific project activities (see also Table 5). In addition, the project will support the establishment of an Interagency Ministerial Coordination Mechanism (ICM) that will aim to improve coordination, collaboration and decision-making on issues pertaining to SMC. The ICM will be supported by the establishment of a number of working groups, including working groups on i) UPOPs; ii) POPs and Hg in Products; iii) Pesticides; and iv) ASGM. In addition to improving coordination between institutions and government agencies, these working groups will allow for better coordination among on-going projects/programmes (and their funding entities) that are focusing on similar topic areas as the project to avoid that project beneficiaries become overwhelmed and annoyed by the uncoordinated approach of similar projects and overlap of well meant activities and interventions is avoided.	Project Manager	No Change
Conflict between the Government of Peru and the Government of Ecuador on the pollution of the Puyango Tumbes basin caused by ASGM.	Political	P = 2 I = 3	Contamination of the transboundary Puyango-Tumbes river basin caused by land-based activities (including ASGM) is a key topic in recent and ongoing bilateral talks. The two countries are engaged in a restoration campaign to reduce the contamination of the Puyango-Tumbes River system and annual bi-national ministerial meetings are being held since 2007. Land-based activities, in particular ASGM and the dumping of mining tailing in rivers, are thought to be the main contributor to contamination of the river basin, in turn impacting downstream livelihoods and human health. The project will work in three (3) priority ASGM communities (in terms of gold production and ore processing) to train 350 ASGM miners in improving ore processing practices, reducing the content of heavy metals in mining tailings and improving their management, leading to pollution reduction of the Puyango-Tumbes river basin.	Project Manager	No Change
Mistrust of miners towards Government agencies and entities (as well as their affiliates – such as UNDP) hampers the active participation of miners in the project.	Political	P = 4 I = 2	Miners and in particular informal ASG miners are extremely mistrustful of Government institutions and their affiliates that are aiming to formalize the ASGM sector, improve working conditions and reduce pollution. Miners are afraid that their property or right to the land on which they are mining might be taken away. Mistrust has significantly increased since the Government enacted a mercury ban in ASGM which has pushed artisanal miners further into informality. It will therefore be extremely important to build trust among the miners and the mining community, otherwise it will be challenging to implement any project activities. Therefore, the project envisages working closely with the leadership of the municipalities, existing cooperatives/mining groups and mining/processing associations that have worked with ASGM communities and international development agencies in the past. The project will focus on building a trust relationship with the mining community before it will start implementation of project activities. The project will also select miners and moderators from the mining communities, and train them as trainers, to build trust.	Project Manager	No Change
Economic incentives perceived too low to adopt and replicate BEP/BAT practices	Financial	P = 2 I = 3	It is unlikely for the industries and the informal miners that will be supported by the project to change their environmental and safety practices and processes if there are no clear financial incentives to do so. It is even more unlikely for industries and informal mining communities that are not directly benefitting from the project to replicate the practices demonstrated by the project if there is no clear understanding of potential financial gains; there are no clear financial incentives, they are not easily accessible and information on how to gain access to these incentives is not easily available. The project	Project Manager	No Change

resulting in continued polluting practices.			will therefore support at least one financial entity to (re)develop a financial product that serves the ASGM sector; Establish a competitive funds mechanism (CFM) to finance environmental and social entrepreneurship and technology innovation within the ASGM sector; Support processing/industry plants to make use of existing tax incentives to finance cleaner production systems; Undertake economic/business case analyses for mining operations/processing plants to identify potential financial gains; and Establish at least one (1) partnership/agreement with a legal gold buyer that buys responsibly produced gold at a higher price. All these project experiences will be captured in case study reports and disseminated to support future replication.		
Delay in the implementation of project activities due to the time it takes to obtain permits/licenses.	Regulatory Operational	P = 4 I = 2	Implementation of certain project activities might depend on the granting of the right permits/licenses. Whether or not such permits/licenses are required, and the pace at which these licences/permits can be granted can impact the pace of project implementation significantly. Implementation of the following activities might be subject to delays if permits/licenses are required and the application/granting process is lengthy: Centralized temporary storage of obsolete pesticides before disposal/export; Temporary installation of a demonstration gold processing plant for training purposes; Disposal of mining tailings produced by project related demonstration activities; and Permits/licenses for the establishment of a Janchera women's plant. The project will do its utmost to work within the scope of existing permits/licenses (e.g. installing the demonstration processing plant on the premises of SENESCYT or processing centers that have overcapacity, installing the Janchera women's plant on the same plot as a processing center with overcapacity; temporarely storing obsolete pesticides in existing pesticide storage facilities for which permits/licenses are in place, etc. etc.). However, if these avenues proof not to be feasible, the project team will embark on the process of applying for the right permits/licenses as early as possible during the project's implementation.	Project Manager + Int. ASGM expert + Nat. POPs Expert	No Change
Activities supported directly or indirectly by the project continue to cause pollution.	Environmental	P = 1 I = 3	This project aims to reduce environmental pollution from a wide variety of sources, however in certain cases there is a risk that pollution will be aggravated by project beneficiaries if the project's management is not cautious. These might include: illegal dumping of mining tailings processed with the direct/indirect support of the project; The production of mining tailing by the project during training and demonstration excercises; An increase in the rinsing of empty pesticide containers leading to increased water usage and potential water/soil contamination at local rinsing stations, among others. To manage these risks, prior to the start of the project's activities, the project will conduct a quick assessment of sound ways to dispose of mining tailing produce by activities supported/organized by the project as well as prepare recommendations to reduce environmental impact from pesticide container rinsing and introduce these at a pesticide distributor (and document these to encourage replication).	Project Manager + Int/Nat. Experts	No Change
Local conflict (e.g. organized crime) hampers sale of gold through legal channels.	Other	P = 2 I = 3	The project aims to shorten the gold supply chain, by supporting miners and mining groups in their formalization processes, increasing their yields and connecting miners to legal buyers who are able to purchase their responsibly produced gold for a higher price. However, middlemen who currently make a margin on this gold, may resist this change, some of whom may be linked to organized crime. Similarly, ore processing centers (which try keep gold recovery yields as low as possible and reprocess gold containing mining tailing for extra profit) might also oppose more effective ore processing plants encouraged by the project. Therefore, the project aims to empower artisanal miners and mining groups by supporting their formalization. Together they stand stronger and will receive more support from the Government considering they are paying taxes, resulting in less harassment.	Project Manager + Int/Nat. Experts	No Change

i. Social and environmental safeguards (SES):

Environmental and social grievances will be reported to the GEF in the annual PIR.

The Social and Environmental Screening (SES) Template has been completed and constitutes the Social and Environmental Screening Report for this project. It has been included as Annex G to the Project Document. The Social and Environmental Screening Template has been filled out using guidance provided in the *Social and Environmental Screening Procedure* and *Toolkit*.

The SES Report indicated the below listed 10 risks, which have been described in more detail in the SES report in Annex S. Based on the average risk rating of the 10 identified risks, the SES indicates a **Low Risk Rating** for the proposed project.

- **Risk 1** *(Low)*: The Project could potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services.
- **Risk 2** *(Low)*: The project could potentially involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods.
- **Risk 3** *(Low)*: The project could pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)
- **Risk 4** *(Low)*: The project could pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning.
- **Risk 5** *(Low)*: The project may involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions).
- **Risk 6** *(Low)*: The proposed project could possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources.
- **Risk 7** *(Low)*: Indigenous people are present in the project area (including project area of influence).
- **Risk 8** *(Low)*: The project could potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or trans boundary impacts.
- **Risk 9** *(Low)*: The proposed project would potentially result in the generation of waste (both hazardous and non-hazardous).
- **Risk 10** *(Low)*: The proposed project would potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials.

During the PPG phase project activities were proposed and designed in such a manner in order to address any potential social and environmental risks that had been identified during the pre-screening of the SESP that was prepared during the PIF stage. The measures that are being proposed by the project to address risks with moderate and high significance have been presented in the attached SES Report (S).

In order to support the resolution of any social and environmental disputes/grievance that may arise during project implementation, the following parties will be consulted:

- **UNDP Country Office (Lead); Ministry of Environment (MAE) (Co-lead); Project Steering Committee (Advisory Role); UNDP Panama Regional Hub (Advisory Role) and Global Environment Facility (GEF)**

And depending on the project activity related to the grievance, one or more of the following project partners:

- **Ministry of Public Health – MSP (incl. INSPI, ARCSA and CIATOX); Ministry of Agriculture, Livestock, Aquaculture and Fisheries – MAGAP (incl. Agrocalidad); Ministry of Mining (incl. ARCOM, INIGEMM, ENAMI EP); Ministry of Electricity and Renewable Energy (MEER); Ministry of Industry and Productivity; and, Private Sector**

iv. Sustainability and Scaling Up:

ASGM – To support the long-term phase down/out of mercury in ASGM and thus ensure sustainability of project results, the project is going to **i) Increase long-term access to financing for artisanal miners** by supporting at least 1 financial entity to develop a financial product that serves the ASGM sector; **ii) Support at least 3 mining groups in their formalization processes**; **iii) Shorten the gold supply chain and increase acces to buyers who pay more for responsibly produced gold** by negotiating partnerships with legal gold buyers to create better and long-term access for artisanal gold miners to higher gold prices; **iv) Improve the capacity of miners and entities that support artisanal miners**, by training trainers, miners and government staff in key areas, establishing a mercury-free gold processing training plant and ensuring that the ownership of the training plant, training/awareness materials and case study reports are transferred to mining institutions/associations for long term use and are posted on already existing ASGM Knowledge Management Hubs (GEF GOLD KM hub; http://www.artisanalmining.org//CASM; Swiss funded ASM - IKH); **v) Assist a minimum of 5 gold processing centers in introducing cleaner mercury-free processing practices** based on economic/business case analyses, making use of existing tax incentives and a competitive fund mechanism (that will be set-up with project support), to finance and introduce cleaner production practices and phase out mercury; **vi) Improve the regulatory and policy framework surrounding ASGM processing practices**; and, vii) **Document and disseminate the success stories of miners in particular with respect to increased recovery (higher gold recovery yields) and better gold prices**.

LCM of Chemicals – To ensure long-term sustainability with respect to the reduction and phase-out of the use and release of Hg and POPs, the project will support the following sustainable interventions: **i) Improve the policy and regulatory framework pertaining to the LCM of chemicals** (support national entities in the development of Ministerial Agreements, guidelines/standards/methodologies for the management of chemicals of concern, development of national plans for the replacement of POPs/Hg containing products and the management of related wastes; and the establishment of an Interagency Coordinating Mechanism (ICM) and working groups on SMC); **ii) Increase the capacity of 10 institutions and 2 laboratories** to improve the management and monitoring of Hg, POPs and products containing POPs and Hg; **iii) Facilitate access to long-term financing for cleaner processes** by developing industry incentives that support conversion to processes which pose less risks and result in less harmful products; **iv) Dispose of 30 tonnes of POPs waste, 10 tonnes of Hg-waste and 90 tonnes of empty pesticide containers** that will not pose any future problems anymore; **v) Demonstrate the phase-down of POPs and Hg containing products and introduce their alternatives**, by identifying and analyzing products containing harmful chemicals, identifying potential product alternatives, and conducting CBAs to inform the ways to phase these products out; **vi) Support 7 facilities in reducing UPOPs releases** by conducting UPOPs assessments, preparing recommendations for BAT/BEP introduction and subsequently support 2 entities (1 HCF and 1 agricultural entity) in making use of tax and industry incentives to finance the introduction of improved practices.

In summary, project sustainability is ensured by phasing-down the use of Hg and POPs, ensuring disposal during project implementation and improving the policy and regulatory framework surrounding phase-out, management and treatment/disposal. Project replication is ensured by improving the capacity of government, the private sector and miners (among others) and facilitating their access to finance to replicate practices that make sense from a financial point of view.

The potential for scaling up is enormous. This is mainly thought to be the case because of a number of reasons: Firstly, the government of Ecuador is known to allocate large budget allocations to address environmental priorities of national interest (e.g. the Puyango River Basin project with a funding of 55 million US$). As such it is expected that when demonstration and pilot interventions have proven successful, the Government is likely to allocation funding to replicate successes. Secondly, the financial products and incentives that have been established with project support for the introduction of cleaner processes, will remain available to miners and the private sector beyond the project's duration.

Finally, the project will support a large array of pilot and demonstration interventions in various sectors that will lend themselves very well to replication in other parts of the country and the region. All lessons-learned and experiences will be documented in case study reports and their outcomes will influence the drafting of regulatory and policy measures related to the LCM of Chemicals and ASGM. Case study reports will be made available through existing Knowledge Management Hubs at national and international level.

V. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): SDGs 1, 2, 3, 6, 7, 8, 9, 11, 12, 13, 14 and 15.					
This project will contribute to the following country outcome included in the UNDAF/Country Programme Document: Outcome 4: by 2018, support has been provided to strengthening institutional and citizen capacities to promote the rights of nature, create conditions for a sustainable low-emission development, and improve the resilience and risk management facing the impacts.					
This project will be linked to the following output of the UNDP Strategic Plan: Output 1.3: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals and waste.					
	Objective and Outcome Indicators	**Baseline**	**Mid-term Target**	**End of Project Target**	**Assumptions**
Project Objective: To protect human health and the environment by adopting the environmentally sound and live cycle management of chemical substances in Ecuador.	2 new partnership mechanisms with funding for sustainable management solutions of natural resources, ecosystem services, chemicals and waste at national level.	No new partnerships with funding for sustainable management solutions of chemicals and waste established yet	2 new partnership mechanisms with funding for sustainable management solutions of chemicals and waste established at national and/or subnational level.	2 new partnership mechanisms with funding for sustainable management solutions of chemicals and waste established at national and/or subnational level.	*1 financial institution and 1 legal gold buyer are interested in signing an agreement with the project.*
	80 of new jobs created (24 jobs for females and 56 jobs for males) through solutions for management of natural resources, ecosystem services, chemicals and waste.	0 new jobs created yet through solutions for the management of chemicals and waste.	32 new jobs created (9 for females and 23 for males) through solutions for the management of chemicals and waste.	80 new jobs created (24 for females and 56 for males) through solutions for the management of chemicals and waste.	*In addition to jobs created by the project (e.g. project consultancies, CFM) project partners fund jobs for ASGM pilot plan operators and trainers.*
	31,187 direct project beneficiaries (9,356 of females and 21,831 of males) *for which the risk of hazardous chemicals and waste has been reduced.*	0 direct project beneficiaries.	9,356 direct project beneficiaries (2,807 female and 6,549 male) *for which the risk of hazardous chemicals and waste has been reduced.*	31,187 direct project beneficiaries (9,356 female and 21,831 male) *for which the risk of hazardous chemicals and waste has been reduced.*	*People trained by the project, communities living within a 1 km radius of a cleaned-up contaminated site, and project stakeholders subjected to project awareness campaigns are safeguarded from exposure to chemicals as a result of the project and/or adequately informed to safeguard themselves and their*

					immediate families (of 4).
Component/Outcome 1 **Component 1**: Strengthen institutional capacity and the regulatory and policy framework for the Sound Management of Chemicals (SMC) based on a Life-Cycle Approach.	Four (4) financial and capacity building plans developed and implemented and capacity of 12 private or public entities increased to enable them to address chemicals of concern.	*National reporting on POPs and Hg statistics/indicators is done but requires further improvement.* *Entities with roles/responsibilities pertaining to the LCM of chemicals coordinate to some extent, but not with all entities that have such roles/responsibilities.*	2 financial and capacity building plans developed and implemented to benefit private or public entities and enable them to address chemicals of concern.	Four (4) financial and capacity building plans developed and implemented and capacity of 12 private or public entities increased to enable them to address chemicals of concern.	*An inter-ministerial agreement for the establishment of the ICM and its Working Groups is approved during the life-time of the project.*
			1.1.1 Development of 2 capacity building plans and 2 financial plans to improve the national reporting on statistics/indicators for POPs, Hg and other chemicals of concern. 1.1.2 Interagency Coordinating Mechanism (ICM) and its working groups established to improve coordination, collaboration and decision-making on issues pertaining to SMC. 1.1.3 Capacity built of 10 institutions to improve the monitoring of chemicals of concern, Hg, POPs and products containing POPs and Hg through tailored training workshops.[11] 1.1.4 Capacity of two (2) analytical laboratories increased enabling them to comply with the National Accreditation Service requirements.		
	Sixteen (16) policies, regulations and standards to achieve the LCM of chemicals revised and/or developed.	*The Government of Ecuador has a fairly sound policy and regulatory framework in place to ensure the LCF of chemicals of concern. However, Ministerial Agreements/Plans and guidelines need to be improved for the mgnt. and phase-out of POPs/Hg in products; mgnt of UPOPs, OPs,*	5 policies, regulations and standards to achieve the LCM of chemicals revised and/or developed.	16 policies, regulations and standards to achieve the LCM of chemicals revised and/or developed.	*The project is able to create sufficient momentum with its partners that Ministerial Agreements, guidelines, standards, national plans and industry incentives not be approved during the lifespan of the project, will be approved after the project has closed.*
			1.2.1 Three (3) Ministerial Agreements (MAs) and their application guides, to address the LCM of Chemicals revised and/or developed and submitted for approval. 1.2.2 Nine (9) tools (guidelines, standards, methodologies, etc.) for the management of chemicals of concern revised/developed.		

[11] *(i.e. UPOPs, POPs and Hg in Products, Pesticides and ASGM related institutions)*

		contaminated sites, HCWM, ASGM mine closure, ASGM waste mgnt, among others.	1.2.3 Two (2) national plans developed for the replacement of POPs or Hg containing products and the management of POPs or Hg containing wastes. 1.2.4 Two (2) Industry incentives developed and proposed for implementation that support conversion to processes which pose less risks and result in less harmful products.	
Component/ Outcome 2 **Component 2:** Eliminate POPs stockpiles and reduce the use and release of initial and newly listed POPs (including those contained in products).	120 tonnes of obsolete POPs and non-POPs pesticides and related waste disposed of.	AGROCALIDAD/APSCA and INNOVAGRO inventoried in 2016 ~ 600 sites and identified a quantity of 5 tonnes of obsolete pesticides. No pesticides contaminated sites have been identified. APCSA and INNOVAGRO collect 40% of empty pesticide containers, leaving an accumulated 2,135 tonnes (by 2019) inadequately disposed of.	0 tonnes of obsolete POPs and non-POPs pesticides and related waste disposed of. / 120 tonnes of obsolete POPs and non-POPs pesticides and related waste disposed of. 2.1.1 One (1) In-depth inventory (incl. characteristics of the impacted (work) population and gender dimensions) of "old" and "new" POPs pesticides, non-POPs pesticides, pesticide contaminated sites and storage facilities completed in partnership with AGROCALIDAD/INNOVAGRO and APCSA. 2.1.2 At least 30 tonnes of obsolete pesticides repacked, transported and disposed of at a licensed treatment/disposal facility. 2.1.3 Clean up or remediation of at least one (1) pesticide contaminated site completed. 2.1.4 Empty pesticide container collection, transportation, recycling and disposal increased by 90 tonnes.	*AGRCALIDAD/APSCA/INNOVAGRO will launch/complete the OPs inventory in 2017.* *APSCA/INNOVAGRO will cover additional costs for the treatment of the increase in collected pesticide containers.* *APCSA/INNOVAGRO are able to increase the number of Centralized Storage Facilities and cover associated staff costs.* *A state institution signs an agreement to make a temporary storage facility for OPs available.*
	25 grams TEQ of UPOPs releases reduced.	Most relevant UPOPs sources in Ecuador (Nov. 2016 PPG baseline assessment): Medical waste incineration (48.19 g-TEQ/yr); Landfills, Waste Dumps and Landfill Mining (16,74 g-TEQ/yr); Household Heating and Cooking – Biomass (13,36 g-TEQ/yr); Waste Burning and Accidental Fires (7.14 g-TEQ/yr);	5 g-TEQ/yr of UPOPs releases reduced. / 25 g-TEQ of UPOPs releases reduced. 2.2.1 Assessment of UPOPs generating processes/practices completed at seven (7) facilities (including 5.500 hectares of agricultural lands). 2.2.2 Recommendations prepared for BEP/BAT interventions at seven (7) facilities. 2.2.3 BEP/BAT introduced to reduce UPOPs releases at two (2) project sites/facilities. 2.2.4 Clean up or remediation of at least one (1) UPOPs contaminated site completed.	*Facilities willing to partner with project and grant access to allow for in-depth baseline assessments.* *2 facilities/companies interested in improving BEP practices and introducing BAT technologies by making use of tax and industry incentives to finance the introduction of improved practices with project support.*

		Iron and Steel Plants (6.25 g-TEQ/yr); Biomass Burning (5.35 g-TEQ/yr); and Biomass Power Plants (1.15 g-TEQ/yr).			
	30 tonnes of new POPs releases reduced.	Priority new-POPs are thought to be PFOs and C-octaBDE (Nov. 2016 PPG baseline assessment) and are potentially contained in products like ABS, high impact polystyrene with ABS, treated leather, etching agents, ferric chloride, aviation hydraulic fluids, insecticides and flame retardants.	The use and release of new POPs reduced by 0 tonnes.	The use and release of new POPs reduced by 30 tonnes.	*UNIDO NIP update to be launched in 2017 provides data on new-POPs in products that can be used by the GEF/UNDP project.* *Cost-effective alternatives can be identified and are available to replace top 2 priority POPs containing products.*
			2.3.1 Ten (10) imported products[12] suspected of containing new POPs (PFOs/c-otaBDE) analyzed to verify the existence of new POPs. 2.3.2 A Cost-Benefit Analysis and Cost-of-Inaction assessment conducted (incl. identification and quantification of differentiated social benefits and costs between women and men) to inform the selection of alternatives and waste management/treatment options for the top 2 priority POPs containing products. 2.3.3 Phase-down (with SENAE) and waste management of top two (2) priority POPs containing products demonstrated in selected sectors/areas.		
Component/ Outcome 3 **Component 3**: Implementation of measure for reduction and elimination of Hg from priority sectors.	2 tonnes of mercury use/releases reduced from ASGM at a non-industrial level.	Mercury releases in the 3 area prioritized by the project (source: Dec. 2016 PPG ASGM Hg Baseline assessment): ▪ Portovelo (Aproplasmin) – 1,638 kg Hg/yr ▪ Ponce Enriquez (Bella Rica) – 2,318 kg Hg/yr ▪ Chinapintza – 1,184 kg Hg/yr	Mercury use/releases from ASGM reduced by 500 kg/yr at a non-industrial level[13].	Total mercury use/releases from ASGM reduced by a total of 2 tonnes at a non-industrial level.	*Institutions or gold processing plants are willing to host the mobile training plant.* *Permitting requirements and processes do not significantly slow down the installation or mobility of the mobile training plant.* *Despite perverse incentives to keep ore extraction yields low, processing plants are interested to work with the project to increase yields.* *Project support is sufficiently*
			3.1.1 Comprehensive mercury baseline assessment (incl. sex disaggregated and gender specific data[14]) completed for all ASGM project sites (Camilo Ponce Enríquez, Portovelo and Chinapintza) at a non-industrial level. 3.1.2 Mobile training plant installed at "home base" location and operationalized. 3.1.3 350 ASGM miners and mining communities trained (of which at least 30% are women, and 5%		

[12] ABS, high impact polystyrene with ABS, treated leather, etching agents: ferric chloride, aviation hydraulic fluids, insecticides, flameretardants.

[13] Everything that is not processed in processing plants, meaning "Chanchas" or "at domestic level" (this latter will not be possible)

[14] Sex, age, ethnicity, levels education, main diseases, family income, population characteristics, heads of households, time use, family members' roles, among other relevant data.

			are indigenous). 3.1.4 At least 5 processing plants (at least 2 occasionally used by women) supported in improving their ore processing. 3.1.5 At least 3 mining groups [15] (of which 1 containing women miners) supported in their formalization processes. 3.1.6 Demonstration pilot focusing on gravity recovery of Hg from contaminated tailings implemented.	*tailored to the needs of women miners to make a difference to their livelihoods.* *Ecuador NAP project (UNIDO) provides data on Hg use in ASGM that can be used by the GEF/UNDP project.*
	35 kg/yr of mercury use/releases avoided from priority sectors (other than ASGM).	Ecuador's priority Hg containing products are (Nov. 2016 PPG baseline assessment): Medical devices (40 tonnes of medical products containing ~ 164 kg of Hg, were in use in 2016 (MSP)) and energy saving lamps (28 kg of mercury is contained in 144 tonnes of lamps currently in use and imported during the period (2013-2016). 2 Hg baselines have been conducted, one in preparation of the project (Nov. 2016 PPG baseline assessment) and 1 in 2008 (National Mercury Release Inventory). For public hospitals, MSP/MAE have signed an agreement and developed a plan to	Mercury releases from priority sectors (other than ASGM) reduced by 10 kg. / Mercury releases from priority sectors (other than ASGM) avoided by 35 kg/yr. 3.2.1 Comprehensive national mercury baseline assessment completed for medical devices and lighting products, and assessment conducted on impact on women/men. 3.2.2 List of available alternatives for Hg containing medical devices and Hg containing lighting products identified (incl. assessment of their costs and benefits). 3.2.3 Assessment concluded of existing disposal and treatment options (national/international level) for mercury containing products and their wastes. 3.2.4 A Cost-Benefit Analysis and Cost-of-Inaction assessment (incl. identification and quantification of differentiated social benefits and costs between women and men) conducted to inform the selection of mercury-free alternatives and waste management/treatment options. 3.2.5 Phase-in of mercury-free alternatives piloted in 1 high profile HCF facility. 3.2.6 Electricity sector pilot project implemented to support the phase-out and/or improved management of spent mercury containing	*Cost-effective alternatives can be identified and are available to replace top 2 priority POPs containing products.*

[15] One in each of the project's locations. A mining group can be a mining company, a mining cooperative, a cohesive society group an association (jancheras).

		phase-out Hg containing medical devices. For private hospitals and the general public, no plan/agreement is yet in place. No sound treatment/recycling options exist for Hg containing products.	lamps. 3.2.7 The environmentally sound treatment/disposal of 10 tonnes of mercury containing waste products demonstrated.		
	Access to finance improved for ASGM sector through development/ improvement of 2 financial products.	In 2016, 136 million USD in loans was granted to the mining sector in Ecuador, of which 23 million US$ was granted to the mining sector in the project's priority areas, of which ~8 million was granted to the mining of precious metals. 92.61% of credit volume was mainly placed by private banks, 6.98% by public financial institutions; 0.31% by mutuals and 0.1% by financial companies. The Central Bank of Ecuador (BCE) purchases gold from ASGM miners, provided that the gold has a licit origin. 2 tax incentives for the ASGM sector exist (LRTI -	1 financial product developed/improved to increase access to finance for ASGM sector	2 financial products developed/improved to increase access to finance for ASGM sector	*1 financial institution and 1 legal gold buyer are interested in signing an agreement with the project.* *1 industry and 1 gold processing plant are interested in applying tax incentives to finance cleaner production.*
			3.3.1 At least one (1) financial entity has developed/improved a product that serves the ASGM sector. 3.3.2 One (1) competitive funds mechanism (CFM)[16] established to finance five (5) environmental and social entrepreneurships and technology innovations within the ASGM. 3.3.3 At least 2 plants (1 ASGM processing plants and 1 industry) have made use of existing tax incentives to finance cleaner production systems. 3.3.4 Responsibly produced gold (10 % produced by women) by a project beneficiary purchased at a higher price by a public or private legal buyer.		

[16] The CFM model is taken from the GEF Small Grants Programme. Methodologies, procedures and monitoring will be applied according SGP application.

		10.7 & LRTI-37 ').			
Component/ Outcome 4 **Component 4**: Raise awareness, ensure project monitoring and disseminate project results and experiences.	11,778 people (3,533 females and 8,245 males) of whom awareness has been raised on the sound management of chemicals.	The project has raised awareness of 0 people on the sound management of chemicals.	Awareness raised of 3,533 people (1,060 female and 2,473 male) on the sound management of chemicals.	Awareness raised of 11,778 people (3,533 female and 8,245 male) on the sound management of chemicals.	*People trained by the project, and project stakeholders subjected to project awareness campaigns are aware of the impact of chemicals of concern and have in turn informed their immediate families (of 4).*
	29 GEF UNDP M&E requirements met and adaptive management applied in response to needs and Mid-term Evaluation (MTE) findings.	0 GEF M&E requirements met by the project.	13 of GEF M&E requirements met and adaptive management applied in response to needs and Mid-term Evaluation (MTE) findings.	29 of GEF M&E requirements met and adaptive management applied in response to needs and Mid-term Evaluation (MTE) findings.	*The project team and UNDP CO are able to meet all the GEF M&E requirements and within the time planned.*
	28 Case study reports, publications, publications, presentations, (web-based) articles, etc. summarizing lessons-learned, best practices and experiences, disseminated at national, regional and global level.	0 publications, presentations, (web-based) articles, etc. summarizing lessons-learned, best practices and experiences, disseminated at national, regional and global level.	10 Case study reports, publications, presentations, (web-based) articles, etc. summarizing lessons-learned, best practices and experiences, disseminated at national, regional and global level.	28 Case study reports, publications, presentations, (web-based) articles, etc. summarizing lessons-learned, best practices and experiences, disseminated at national, regional and global level.	*The project will be able to make use of existing knowledge platforms (GEF GOLD, Swiss ASG – IKH, old CASM site) to disseminate case study reports, publications, presentation, articles etc.*

VI. MONITORING AND EVALUATION (M&E) PLAN

The project results as outlined in the project results framework will be monitored annually and evaluated periodically during project implementation to ensure the project effectively achieves these results.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GEF-specific M&E requirements (as outlined below) will be undertaken in accordance with the GEF M&E policy and other relevant GEF policies.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including the GEF Operational Focal Point and national/regional institutes assigned to undertake project monitoring. The GEF Operational Focal Point will strive to ensure consistency in the approach taken to the GEF-specific M&E requirements (notably the GEF Tracking Tools) across all GEF-financed projects in the country. This could be achieved for example by using one national institute to complete the GEF Tracking Tools for all GEF-financed projects in the country, including projects supported by other GEF Agencies.

M&E Oversight and monitoring responsibilities:

Project Manager: The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP-GEF RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

The Project Manager will develop annual work plans based on the multi-year work plan included in Annex A, including annual output targets to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. gender strategy, KM strategy etc..) occur on a regular basis.

Project Board: The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

Project Implementing Partner: The Implementing Partner is responsible for providing any and all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. 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 by and generated by the project supports national systems.

UNDP Country Office: The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including the

annual GEF PIR, the *independent mid-term review* and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.

The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed, and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.

The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).

UNDP-GEF Unit: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

Audit: The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies on NIM implemented projects.[17]

Additional GEF monitoring and reporting requirements:
Inception Workshop and Report: A project inception workshop will be held within two months after the project document has been signed by all relevant parties to, amongst others:
a) Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project implementation;
b) Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
c) Review the results framework and finalize the indicators, means of verification and monitoring plan;
d) Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP in M&E;
e) Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender strategy; the knowledge management strategy, and other relevant strategies;
f) Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
g) Plan and schedule Project Board meetings and finalize the first year annual work plan.

The Project Manager will prepare the inception report no later than one month after the inception workshop. The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board.

GEF Project Implementation Report (PIR): The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual GEF PIR covering the reporting period July (previous year) to June (current year) for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR.

[17] See guidance here: https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx

The PIR submitted to the GEF will be shared with the Project Board. The UNDP Country Office will coordinate the input of the GEF Operational Focal Point and other stakeholders to the PIR as appropriate. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

GEF Focal Area Tracking Tools: The following GEF Tracking Tool(s) will be used to monitor global environmental benefit results:
The baseline/CEO Endorsement GEF Focal Area Tracking Tool(s) – submitted in Annex D to this project document – will be updated by the Project Manager/Team and shared with *the* mid-term review consultants and terminal evaluation consultants (not the evaluation consultants hired to undertake the *MTR* or the TE) before the required review/evaluation missions take place. The updated GEF Tracking Tool(s) will be submitted to the GEF along with the completed Mid-term Review report and Terminal Evaluation report.

Independent Mid-term Review (MTR): An independent mid-term review process will begin after the second PIR has been submitted to the GEF, and the MTR report will be submitted to the GEF in the same year as the 3rd PIR. The MTR findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the review process and the MTR report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final MTR report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

Terminal Evaluation (TE): An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terminal evaluation process will begin three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Project Manager will remain on contract until the TE report and management response have been finalized. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center. As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final TE report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The TE report will be publically available in English on the UNDP ERC.

The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC). Once uploaded to the ERC, the UNDP IEO will undertake

a quality assessment and validate the findings and ratings in the TE report, and rate the quality of the TE report. The UNDP IEO assessment report will be sent to the GEF IEO along with the project terminal evaluation report.

Final Report: The project's terminal PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Table 4. Mandatory GEF M&E Requirements and M&E Budget

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget[18] (US$)		Time frame
		GEF grant	Co-financing	
Inception Workshop	UNDP Country Office	12,000[19]	38,400	Within two months of project document signature
Inception Report	Project Coordinator	None	None	Within two weeks of inception workshop
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	None	Quarterly, annually
Monitoring of indicators in project results framework	Project Coordinator	0[20]	0	Annually
GEF Project Implementation Report (PIR)	Project Coordinator and UNDP Country Office and UNDP-GEF team	None	None	Annually
NIM Audit as per UNDP audit policies	UNDP Country Office	Per year: 5,000/yr 25,000 total	80,000	Annually or other frequency as per UNDP Audit policies
Lessons learned and knowledge generation	Project Coordinator	None	None	Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	Project Coordinator UNDP CO	None	None	On-going
Addressing environmental and social grievances	Project Coordinator UNDP Country Office	None for time of project coordinator, and UNDP CO	None	

[18] Excluding project team staff time, UNDP staff time and travel expenses.

[19] Includes costs of two inception workshops: one in Quito and one in the ASGM project areas.

[20] Monitoring of indicators in the PRF is part of the responsibilities of the project team (18% time of coordinator, 20% time of admin-financial assistant, 20% time of technical team).

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget[18] (US$)		Time frame
		GEF grant	Co-financing	
	BPPS as needed			
Project Board meetings	Project Board UNDP Country Office Project Manager	6,467	20,500	2 Project Board meetings per year – 10 in total.
Supervision missions	UNDP Country Office	None[21]	20,000	Annually
Oversight missions	UNDP-GEF team	None[22]	20,000	Troubleshooting as needed
Knowledge management as outlined in Outcome 4	Project Coordinator	51,000	163,200	On-going
GEF Secretariat learning missions/site visits	UNDP Country Office and Project Manager and UNDP-GEF team	None	None	To be determined.
Mid-term GEF Tracking Tool to be updated by	Project Coordinator	5,000	16,000	Before mid-term review mission takes place.
Independent Mid-term Review (MTR) and management response	UNDP Country Office and Project team and UNDP-GEF team	38,000	89,600	Between 2nd and 3rd PIR.
Terminal GEF Tracking Tool to be updated by	Project Coordinator	7,000	22,400	Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE) included in UNDP evaluation plan, and management response	UNDP Country Office and Project team and UNDP-GEF team	52,000	134,400	At least three months before operational closure.
Translation of MTR and TE reports into English	UNDP Country Office	11,000	35,200	
TOTAL indicative COST Excluding project team staff time, and UNDP staff and travel expenses		**207,467**	**1,369,700**	

[21] The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

[22] The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Roles and responsibilities of the project's governance mechanism: The project will be implemented over a period of 60 months following UNDP's national implementation modality, according to the Standard Basic Assistance Agreement between UNDP and the Government of Ecuador, and the Country Programme, with UNDP as the GEF Implementing Agency.

The **Implementing Partner** for this project is the **Ministry of Environment (MAE)** and the **Responsible Party** is the **Ministry of Mines (MoM)**.

The Implementing Partner is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources.

MAE, will be responsible at the highest level for ensuring that project implementation follows national policies and standards, and will represent the project in the annual tripartite reviews. In line with its responsibilities as GEF Focal Point, MAE will have a key role in achieving Component 1, Component 2 and Component 3 (specially outcome 3.2, Mercury releases from priority sectors (other than ASGM) reduced by 35 Kg/year through the gradual phase-out of Mercury containing products and introduction of improved waste management and storage practices (in combination with development and implementation of policy and regulatory measures). MoM, as the governing body and planner of the mining sector, guarantees the corresponding application of the policies, guidelines and plans applicable in the zones corresponding to the development of the sector, will have a key role in achieving Component 3 (especially Outcome 3.1. Two tonnes of mercury use/releases reduced from ASGM at a non-industrial level and Outcome 3.3. Access to finance improved for ASGM sector through development/improvement of 2 financial products). Both, MAE and MoM will have key roles in achieving Component 1 (Strengthen institutional capacity and the regulatory and policy framework for the Sound Management of Chemicals (SMC) based on a Life-Cycle Approach) and Component 4 (Raise awareness, ensure project monitoring and disseminate project results and experiences).

The following table includes the distribution of responsibilities between MAE and MoM in achieving the project´s components and outcomes.

Table 5. Division of outputs between MAE and MoM

Outcomes/Outputs	MAE	MoM
Componenet 1. Strengthen institutional capacity and the regulatory and policy framework for the Sound Management of Chemicals (SMC) based on a Life-Cycle Approach.		
1.1.1 - Capacity building plans and 2 financial plans to improve the national reporting on statistics/indicators for POPs, Hg and other chemicals of concern.	X	X
1.1.2 - Interagency Coordinating Mechanism (ICM) and its working groups established to improve coordination, collaboration and decision-making on issues pertaining to SMC.	X	X
1.1.3 - Capacity built of 10 institutions to improve the monitoring of Hg, POPs and products containing POPs and Hg at various levels with a national approach.	X	X
1.1.4 - Capacity of two (2) analytical laboratories increased enabling them to comply with the National Accreditation Service requirements.	X	
1.2.1 - Three (3) Ministerial Agreements (MA) and their application guides, to address the LCM of Chemicals revised and/or developed and submitted for approval.	X	
1.2.2 - Nine (9) tools (guidelines, standards, methodologies, etc.) for the management of chemicals of concern revised/developed.	X	
1.2.3 - Two (2) national plans developed for the replacement of POPs or Hg	X	

containing products and the management of POPs or Hg containing wastes.		
1.2.4 - Two (2) Industry incentives developed (incl. affirmative action mechanisms for youth and women) and propose for implementationed that support conversion to processes which pose less risks and result in less harmful products.	X	X
Component 2. Eliminate POPs stockpiles and reduce the use and release of initial and newly listed POPs (including those contained in products)		
2.1.1 - One (1) In-depth inventory (incl. characteristics of the impacted (work) population and gender dimensions) of "old" and "new" POPs pesticides, non-POPs pesticides, pesticide contaminated sites and storage facilities completed in partnership with AGROCALIDAD/INNOVAGRO and APCSA.	X	
2.1.2 - 30 tonnes of obsolete pesticides repacked, transported and disposed of at a licensed treatment/disposal facility.	X	
2.1.3 - Clean up or remediation of at least one (1) pesticides contaminated site completed.	X	
2.1.4 - Empty pesticide container collection, transportation, recycling and disposal increased by 90 tonnes.	X	
2.2.1. - Assessment of UPOPs generating processes completed at seven (7) facilities (including 5.500 hectares of agricultural lands).	X	
2.2.2 - Recommendations prepared for BEP/BAT interventions at seven (7) facilities.	X	
2.2.3 - BEP/BAT introduced to reduce UPOPs releases at two (2) project sites/facilities.	X	
2.2.4 - Clean up or remediation of at least one (1) UPOPs contaminated site completed.	X	
2.3.1 - Ten (10) import products suspected of containing new POPs (PFOs/c-octaBDE) analyzed to verify the existence of new POPs.	X	
2.3.2 - A Cost-Benefit Analysis and Cost-of-Inaction assessment conducted (incl. identification and quantification of differentiated social benefits and costs between women and men) to inform the selection of alternatives and waste management/treatment options for the top 2 priority POPs containing products.	X	
2.3.3 - Phase-down (with SENAE) and waste management of top two (2) priority POPs containing products demonstrated in selected sectors/areas.	X	
Component 3. Implementation of measure for reduction and elimination of Hg from priority sectors.		
3.1.1 - Comprehensive mercury baseline assessment (incl. sex disaggregated and gender specific data) completed for all ASGM project sites (Camilo Ponce Enríquez, Portovelo and Chinapintza) at a non-industrial level.		X
3.1.2 - Mobile training plant installed at "home base" location and operationalized.		X
3.1.3 - 350 ASGM miners and mining communities trained (of which at least 30% are women, and 5% are indigenous) through monthly training events in ore analysis, recovery of minerals by gravimetric concentration methods, legislation, formalization, access to finance/existing financial incentives, tailing management, site remediation, among else.	X	X
3.1.4 - At least 5 processing plants (at least 2 occasionally used by women) supported in improving their ore processing (e.g. introduction of gravimetric concentration methods, improved tailings and water management, among other interventions).	X	X
3.1.5 - At least 3 mining groups (of which 1 containing women miners)		X

supported in their formalization processes.		
3.1.6 - Demonstration pilot focusing on gravity recovery of Hg from contaminated tailings implemented.		X
3.2.1 - Comprehensive national mercury baseline assessment (including identification of types of mercury containing products in use) completed for medical devices and lighting products, and assessment conducted on impact on women/man.	X	
3.2.2 - List of available alternatives for Hg containing medical devices and Hg containing lighting products identified (incl. assessment of their costs and benefits).	X	
3.2.3 - Assessment conducted of existing disposal and treatment options (national/international level) for mercury containing products and their wastes.	X	
3.2.4 - A Cost-Benefit Analysis and Cost-of-Inaction assessment (incl. identification and quantification of differentiated social benefits and costs between women and men) conducted to inform the selection of mercury-free alternative and waste management/treatment options.	X	
3.2.5 - Phase-in of mercury-free alternatives piloted in 1 high profile HCF facility, through awareness raising, training (at least 50% of staff trained are women) and adapting procurement practices (incl. evaluation and use of alternatives by healthcare staff, selection and procurement of mercury-free medical products and development of tailored product switch protocols while).	X	
3.2.6 - Electricity sector pilot project implemented to support the phase-out and/or improved management of spent mercury containing lamps. Based on the results and outcomes of Outputs 3.2.1 – 3.2.4 the project will support a pilot activity in the electricity sector that will aim to support the phase-out and/or the improved management of mercury containing spent lamps. The pilot activity will be designed in such a way that it will support the electricity sector in complying with Minamata Convention requirements.	X	
3.2.7 - The environmentally sound treatment/disposal of 10 tons of mercury containing waste products demonstrated.	X	
3.3.1 - At least one (1) financial entity has developed/improved a product that serves the ASGM sector that includes soft criteria that promote the formalization and association of women/youth, the legalization of land, and women entrepreneurship in ASGM).		X
3.3.2 - One (1) competitive funds mechanism (CFM) that includes soft criteria that stimulate innovative youth/women entrepreneurship and association) established to finance five (5) environmental and social entrepreneurships and technology innovations within the ASGM sector		X
3.3.3 - At least 2 plants (1 ASGM processing plants and 1 industry) have made use of existing tax incentives to finance cleaner production systems.	X	X
3.3.4 - Responsibly produced gold by a project beneficiary purchased at a higher price by a public or private legal buyer.		X
Component 4. Raise awareness, ensure project monitoring and disseminate project results and experiences.	**X**	**X**

The project organization structure includes: 1) The Project Steering Committee or Project Board (PB); 2) Quality Assurance; 3) National Project Director (NPD); 4) Project Management Unit (PMU); 5) Working Groups; and, 6) Project Technical Committee (see Figure below).

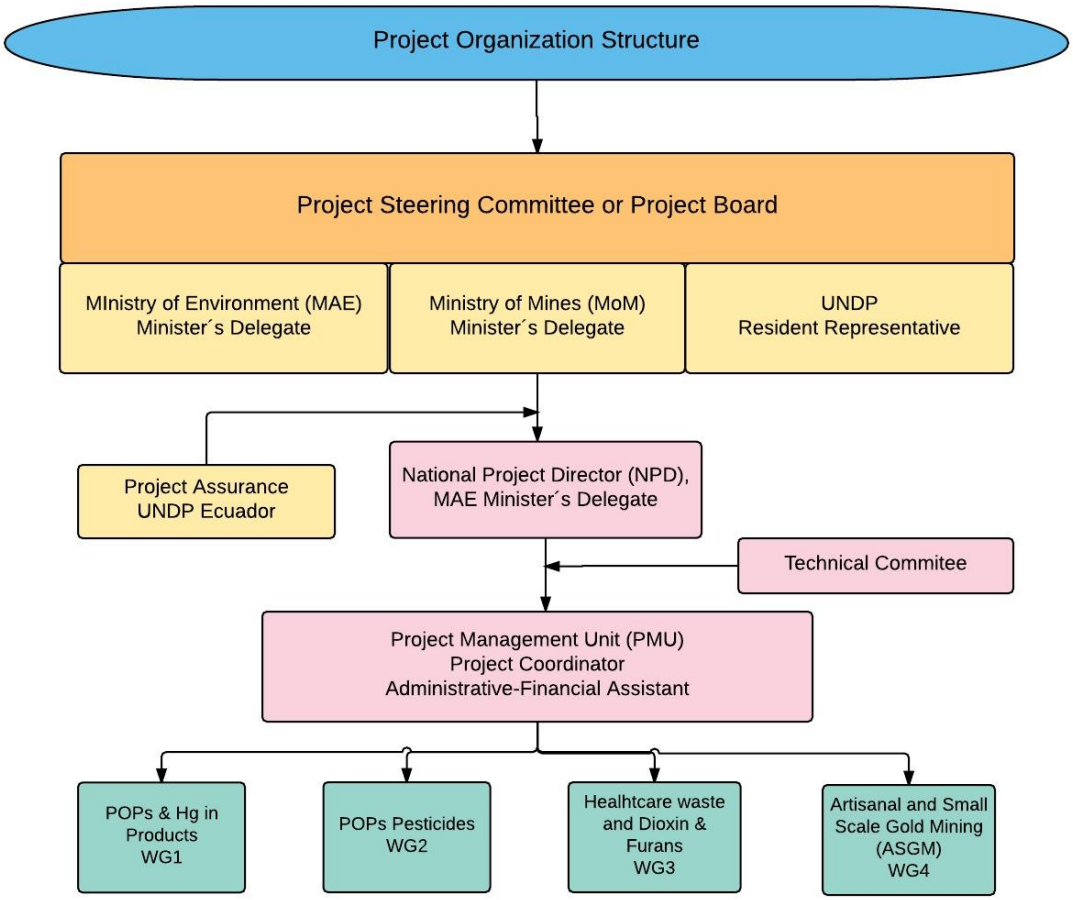

Figure 2: Project Organization Structure

The **Project Board** (PB, also called the Project Steering Committee) is the highest level of analysis and decision making in regards to programming and achievement of results; and is responsible for making by consensus, management decisions when guidance is required by the Project Coordinator, including recommendation for UNDP and/or Implementing Partner approval of the project's Annual Work Plan (AWP), AWP budget and AWP budget revisions. The PB will be established upon project inception. In its first meeting the Project Board will prepare and adopt detailed terms of reference for its functioning.

The Project Board is comprised of the following individuals: i) Delegate of the MAE Minister as Implementing Partner and leader of the project; ii) Delegate of the MoM Minister, as Responsible Party; and iii) the UNDP Resident Representative, as Implementating Agency. The PB will meet twice a year to review project progress and take project-related strategic and critical decisions. The Project Coordinator will be a member of the PB without vote, and will be assisted by the Administrative-Financial Assistant and the M&E Assistant to provide information as may be requested.

The PB will be responsible for making executive decisions for the project, in particular when guidance is required by the Project Coordinator. The Project Board will play a critical role in facilitating inter-ministerial coordination, project monitoring and evaluations by quality assuring these processes and products, and using evaluations for performance improvement, accountability and learning. It will ensure that required resources are committed and will arbitrate on any conflicts within the project or negotiate a solution to any problems with external bodies. In addition, it will approve the appointment and responsibilities of the Project Coordinator and any delegation of its Project Assurance responsibilities. Specifically, the PB will be responsible for: (i) approving the annual work plan and budget; (ii) achieving coordination among the various government agencies and key stakeholders; (iii) guiding project implementation to ensure alignment with national and local planning processes and sustainable resource use; (iv) ensuring the participation of key stakeholders in consensus building processes; (v) overseeing the work being carried out by the Project National Director, the Project Coordinator, the Project Technical Team and the institutional technical working groups; (vi) reviewing key reports (such as PIRs); (vii) approve the Mid Term Review and Terminal Evaluation Report and follow up on the managerial responses, and (viii) monitoring progress and the effectiveness of project implementation.

The PB will be convened by the Project Coordinator in advance to give the members sufficient time to schedule the meeting and agree on the agenda. The Project Coordinator will prepare minutes of each meeting. Extraordinary meetings of the PB will be convened when deemed necessary and by request of one of its members. Representatives of other UNDP/GEF RCU offices may participate in PB meetings (without vote). When necessary, the PB will invite key stakeholders to provide background information/technical knowledge on specific themes.

In order to ensure UNDP's ultimate accountability for the project's results, PB decisions will be made in accordance with standards that shall ensure management for development results, best value for money, fairness, integrity, transparency and effective international competition. In case consensus cannot be reached within the Board, the final decision shall rest with UNDP. Preliminary terms of reference for the Project Board are contained in Annex F.

Project management: The **National Project Director (NPD)** will be appointed by MAE as Implementing Partner. The NPD will be responsible for orienting and advising the National Project Coordinator on Government policy and priorities. The NDP will be supported by the Technical Committee (see below) and will meet with the Technical Committee on a quarterly basis to review coherence of the project interventions, including results, risks, planning and procurement processes on a quarterly basis. The NPD, designated by MAE, will be MAE´s National Environmental Control Director, he/she will sign and approve procurement of services and goods (based on the tri-monthly plans prepared and approved by the Technical Committee) and will delegate to the Project Coordinator the approval and signature of specific payment requests. The Combined Delivery Report (CDR) will be jointly approved through the Technical Committee in each quarterly meeting and signed by the NPD.

The **Project Management Unit (PMU)** will be established in a private office and will consist of a Project Coordinator and an Administrative-Financial Assistant. The Project Coordinator reports to the NPD and the PB. The Project Coordinator shall run the project on a day-to-day basis and his/her prime responsibility shall be to ensure that the project produces the results specified in the project document, to the required standards of quality and within the specified constraints of time and cost. The Project Coordinator will be a person with significant technical experience related to the scope of the project in addition to strong project management skills. S(he) will provide overall technical direction for delivery of key outcomes as part of his/her functions. In addition S(he) will provide managerial leadership for the project, working closely with institutions represented in the PB, the Technical Committee and Working Groups. S(he) will be recruited following UNDP procedures and the successful candidate´s time will be partly dedicated to project management functions and partly to technical advice on project outcomes. S/he will be the main project contact person for external communications and will act as Secretary to the PB meetings, as well as other meetings between MAE, MoM and UNDP. Upon project inception s/he will prepare a Project Management and Operations Manual, including responsibilities, procedures and details for smooth and effective implementation, which will be approved by the PB. The Administrative-Financial Assistant will report to the Project Coordinator and provide support in management and administration of the project as well as provide logistical support to technical components of the project. Terms of Reference for the Project Coordinator and the Administrative-Financial Assistant are included in Annex F.

The PMU will be responsible for: (i) ensuring professional and timely implementation of the activities and delivery of the reports and other outputs identified in the project document; (ii) coordination and supervision of the activities outlined in the project document; (iii) undertaking necessary organizational arrangements for all project meetings; (iv) contracting of qualified local and international experts who meet formal UNDP/GEF requirements; (v) manage and be responsible for all financial transactions to achieve planned project targets in consultation with the Implementing Partner and the other members of the PB; (vi) establishing effective networking between project stakeholders, specialized international organizations and the donor community; ensure networking among the project's key stakeholders; (vii) review and make recommendations for reports produced under the project; (viii) establish and endorse the thematic areas, with a view to ensuring linkages to national policy goals, relevance, effectiveness and impartiality of the decision making process; and (ix) quarterly follow-up of the Annual Work Plan with the NPD.

The **Project Assurance** role will be assumed by the UNDP Country Office, specifically by the Responsible for the Environment and Energy Unit. Additional quality assurance will be provided by the UNDP-GEF Regional Technical Advisor based in Panama as needed and in accordance with the project cycle management services provided by the UNDP GEF unit.

As GEF implementing agency, UNDP is ultimately accountable and responsible for the delivery of results, subject to their certification by MAE, as Implementing Partner. UNDP shall provide project cycle management services as defined by the GEF Council that will include the following:

1) Providing financial and audit services to the project.
2) Overseeing financial expenditures against project budgets.
3) Ensuring that activities including procurement and financial services are carried out in strict compliance with UNDP/GEF procedures.
4) Ensuring that the reporting to the GEF is undertaken in line with GEF requirements and procedures.
5) Facilitate project-learning, exchanges with and outreach within the GEF family.
6) Contract the project mid-term and final evaluations and trigger additional reviews and/or evaluations as necessary and in consultation with the project counterparts.

Governance role for project target groups: The **Technical Committee** will be chaired by MAE and will be made up by the delegates of the technical areas of MAE and MoM designated by each Minister, the UNDP Country Office delegate, the PMU and the project technical teams. MAE will appoint a chairman to the Technical Committee. The Project Coordinator and the PMU will act as Secretary to the Technical Committee. The Technical Committee will meet on a quarterly basis to review risks, priorities, and compliance with social and environmental safeguards, prepare annual and multi-annual work plans and budgets, as well as the annual and quarterly procurement contracts. In general, it will undertake monitoring and evaluation of the annual and quarterly planning, maintaining an integrated single project approach, co-implemented by MAE as Implementing Partner and MoM as the main Responsible Party.

UNDP Direct Project Services as requested by Government: The UNDP, as International Agency for this project, will provide project management cycle services for the project as defined by the GEF Council. In addition, the Government of Ecuador may request UNDP direct services for specific projects, according to its policies and convenience. The UNDP and the Minister of Environment acknowledge and agree that those services are not mandatory, and will be provided only upon Government request. If requested, the services would follow the UNDP policies on the recovery of direct costs. These services (and their costs) are specified in the Agreement (Annex P and Q). As is determined by the GEF Council requirements, these service costs will be assigned as Project Management Costs, identified in the project budget.

Four **Working Groups** will be established under the supervision of the Technical Committee with the purpose of monitoring and providing feedback for each of the project outcomes. The Working Groups will be made up of delegates from MAE and MoM, designated delegates from each participating Minister, the technical teams hired

by the project, and any suggestions made by the Technical Committee in accordance with the activities foreseen under each project component. The Working Groups will be convened by the Project Coordinator at the request of the Technical Committee. The Project Coordinator will delegate to his team members the elaboration of minutes of each meeting and documentation of the recommendations for implementing each outcome. Extraordinary meetings may be convened as per request of the representative of each group, when necessary. The table below includes the composition of the Working Groups.

Table 6. Composition of the Working Groups

Project Component	Working Groups	Participant institutions
C1. Strengthen institutional capacity and the regulatory and policy framework for the Sound Management of Chemicals (SMC) based on a Life-Cycle Approach.	All Groups	
C2. Eliminate POPs stockpiles and reduce the use and release of initial and newly listed POPs (including those contained in products).	WG1: POPs & Hg in Products	MAE, CEER, INEN, SENAE, COMEX, MSP, MEER, MIPRO, UNDP.
	WG2: POPs Pesticides	MAE, MAGAP, AGROCALIDAD, INIAP, FAO, UNDP.
	WG3: Healthcare waste and Dioxin & Furans	MAE, MSP, AME, CONGOPE, CEMENT PLANTS, GADs (Municipalities), UNDP
C3. Implementation of measures for the reduction and elimination of Hg from priority sectors.	WG4: ASGM and WG1: POPs & Hg in Products	MAE, MoM, INIGEMM, ARCOM, CEER, SENAGUA, UNDP.
C4: Raise awareness, ensure project monitoring and disseminate project results and experiences.	All Groups	

Additionally, the competent Under-secretariats of MAE and MoM will ensure the integrated and coordinated implementation of the proposed GEF Project, through the established governance structures, aiming for integration and a coherent territorial intervention e.g. periodic meetings, joint elaboration of annual work plans, information sharing on progress, shared human resources, acquisitions, consultancies, results and M&E.

Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information**:** In order to accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[23] and the GEF policy on public involvement[24]. Logos of MAE and MoM will be included upon approval and following the regulations for their use.

Contribution of the Implementing Partner and the main Responsible Party: MAE will contribute to this initiative through the active participation of their technical staff, particularly those staff from the National Environmental Control Directorate. MoM will contribute through the active participation of their technical staff of the different under-secretariats and dependencies.

[23] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

[24] See https://www.thegef.org/gef/policies_guidelines

Property of goods and equipment: Goods and equipment purchased as part of this Project will belong to the UNDP CO during the implementation phase, and transfer to national beneficiaries will be undertaken in accordance with UNDP procedures and policies and subject to agreement with MAE as Implementing Partner and MoM as Responsible Party. Only national organizations will be considered as beneficiaries.

Grants: Grants will be granted following UNDP Micro -Capital Grants´ policies.

VIII. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is USD 49,061,428. This is financed through a GEF grant of USD 8,490,000 and *USD* 40,571,428 in parallel co-financing. UNDP, as the GEF Implementing Agency, is responsible for the execution of the GEF resources and the cash co-financing transferred to UNDP bank account only.

Parallel co-financing: The actual realization of project co-financing will be monitored during the mid-term review and terminal evaluation process and will be reported to the GEF. The planned parallel co-financing will be used as follows:

Table 7. Overview of co-financing

Co-financing source	Co-financing type	Co-financing amount (USD)	Planned Activities/Outputs	Risks	Risk Mitigation Measures
Ministry of Environment (MAE)	Grant	3,102,082	Support in project´s activities related to all components, with the development of regulations, control and management of all chemical substances in all productive sectors.	Low risk since the resources belong to the national budget.	The UNDP CO will monitor the Ministry's co-financing contribution to the project.
Ministry of Environment (MAE)	In kind	11,868,421	Support in project´s activities related to all components, with the development of regulations, control and management of all chemical substances in all productive sectors.	Low risk since the resources belong to the national budget.	The UNDP CO will monitor the Ministry's co-financing contribution to the project.
Ministry of Mines (MoM)	Grant	3,540,834	Support in project´s activities related to components 1, 3 and 4, with the development of regulations, control and management of mercury in ASGM sector.	Low risk since the resources belong to the national budget.	The UNDP CO will monitor the Ministry's co-financing contribution to the project.
Ministry of Mines (MoM)	In Kind	7,946,978	Support in project´s activities related to components 1, 3 and	Low risk since the resources belong to the	The UNDP CO will monitor the Ministry's

			4, with the development of regulations, control and management of mercury in ASGM sector.	national budget.	co-financing contribution to the project.
Ministry of Health (MSP)	In kind	4,797,818	Support in project´s activities related to components 1, 3 and 4 with the development of regulations, control and management of all chemical substances in health sector.	Low risk since the resources belong to the national budget.	The UNDP CO will monitor the Ministry's co-financing contribution to the project.
APCSA	Grant	439,500	Investment in inventory of POPs pesticides and BAT/BEP for obsolete POPs and non-POPs pesticides	Low risk since the APCSA was already planning to make these investments and its start for April, was announced publicly.	APCSA and the Ministry of Agriculture signed an agreement to develop these activities.
APCSA	In kind	805,978	Investment in inventory of POPs pesticides and BAT/BEP for obsolete POPs and non-POPs pesticides	Low risk since the APCSA was already planning to make these investments and its start for April, was announced publicly.	APCSA and the Ministry of Agriculture signed an agreement to develop these activities.
INNOVAGRO	Grant	558,873	Investment in inventory of POPs pesticides and BAT/BEP for obsolete POPs and non-POPs pesticides	Low risk since the INNOVAGRO was already planning to make these investments and its start for April, was announced publicly.	INNOVAGRO and the Ministry of Agriculture signed an agreement to develop these activities.
INNOVAGRO	In kind	626,897	Investment in inventory of POPs pesticides and BAT/BEP for obsolete POPs and non-POPs	Low risk since the INNOVAGRO was already planning to	INNOVAGRO and the Ministry of Agriculture signed an

			pesticides	make these investments and its start for April, was announced publicly.	agreement to develop these activities.
Ministry of Agriculture, (MAGAP) - AGROCALIDAD	In Kind	1,453,220	Support in project´s activities related to components 1 and 2, with the development of regulations, control and management of POPs and non-POPs pesticides in the agricultural sector.	Low risk since the resources belong to the national budget	The UNDP CO will monitor the Ministry's co-financing contribution to the project.
National Water Secretariat (SENAGUA)	In Kind	1,034,038	Support in project´s activities related to components 1, 2 and 3, specifically in the management and control of water quality and regulations for the use of water in productive activities.	Low risk since the resources belong to the national budget.	The UNDP CO will monitor the Secretariat's co-financing contribution to the project.
Ministry of Productivity	In Kind	380,563	Support in project´s activities related to component 1, specifically in the development of regulations and increase of analytical capacity of the country.	Low risk since the resources belong to the national budget	The UNDP CO will monitor the Ministry's co-financing contribution to the project.
Ecuador Normalization Service (INEN)	In Kind	1,021,762	Support in project´s activities related to component 1, specifically in the development, distribution and application of regulations regarding chemical substances.	Low risk since the resources belong to the national budget	The UNDP CO will monitor the Institution's co-financing contribution to the project.
Ministry of Electricity and Renewable Energy (MEER)	In Kind	1,484,464	Support in project´s activities related to components 3, specifically in the management of mercury in the electric sector.	Low risk since the resources belong to the national budget	The UNDP CO will monitor the Ministry's co-financing contribution to the project.
Coordination Ministry for	In Kind	10,000	Support in project´s activities related to	Low risk since the resources	The UNDP CO will monitor

Strategic Sectors (MICSE)			components all components by helping in the coordination with project´s key stakeholders (MAE and MoM).	belong to the national budget.	the Ministry's co-financing contribution to the project.
SEF Canada Ltd. Clean Gold Community Solutions	Grant	1,500,000	Support in project´s activities related to component 3, such as, implementing a clean gold processing plant, miner's formalization, training and access to funding for miners through the entrepreneurial development process.	Low risk since most of the resources for this project have already been raised and it will start in the fall 2017.	The UNDP CO will monitor the co-financing contribution to the project.

Budget Revision and Tolerance: As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project coordinator to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board. Should the following deviations occur, the Project Manager and UNDP Country Office will seek the approval of the UNDP-GEF team as these are considered major amendments by the GEF:
a) Budget re-allocations among components in the project with amounts involving 10% of the total project grant or more;
b) Introduction of new budget items/or components that exceed 5% of original GEF allocation.

Any over expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

Refund to Donor: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the UNDP-GEF Unit in New York.

Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. On an exceptional basis only, a no-cost extension beyond the initial duration of the project will be sought from in-country UNDP colleagues and then the UNDP-GEF Executive Coordinator.

Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP.

Financial completion: The project will be financially closed when the following conditions have been met:
a) The project is operationally completed or has been cancelled;
b) The Implementing Partner has reported all financial transactions to UNDP;
c) UNDP has closed the accounts for the project;

d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

The project will be financially completed within 12 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

IX. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Atlas Proposal or Award ID:	00100779	Atlas Primary Output Project ID:	00103569
Atlas Proposal or Award Title:	GEF POPs & Hg		
Atlas Business Unit	ECU10		
Atlas Primary Output Project Title	GEF POPs & Hg		
UNDP-GEF PIMS No.	5706		
Implementing Partner	MAE		

GEF Component/Atlas Activity	Responsible Partner (Atlas Implementing Agent)	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	See Budget Note:
COMPONENT/ OUTCOME 1: Strengthen institutional capacity and the regulatory and policy framework for the Sound Management of Chemical based on a Life-Cycle Approach	**MAE**	**62000**	**GEF**	71200	International Consultants	-	23,589	23,589	-	-	47,178	1.
				71300	Local Consultants	48,188	145,717	106,400	40,400	10,800	351,505	2.
				71600	Travel	15,597	15,597	15,597	15,597	15,596	77,984	
				72200	Equipment and Furniture	26,333	135,000	-	-	-	161,333	3.
				72500	Supplies	2,000	2,000	2,000	2,000	2,000	10,000	
				74200	Audio Visual & Print Prod, Costs	7,000	20,000	27,000	24,000	7,000	85,000	4.
				75700	Training, Workshops and Confer	10,500	20,500	19,500	4,500	-	55,000	5.
				72300	Other materials & goods	2,400	2,400	2,400	2,400	2,400	12,000	
					sub-total GEF	**112,018**	**364,803**	**196,486**	**88,897**	**37,796**	**800,000**	
					Total Outcome 1	**112,018**	**364,803**	**196,486**	**88,897**	**37,796**	**800,000**	
COMPONENT/				71200	International Consultants	12,000	74,000	74,000	-	-	160,000	6.
				71300	Local Consultants	123,240	161,890	241,889	241,889	98,234	867,142	7.
				71400	Contractual Services - Individ	45,031	45,031	45,031	45,031	45,031	225,155	8.
				71600	Travel	14,359	14,359	14,359	14,359	14,359	71,795	
				72100	Contractual Services-Companies	25,000	178,000	339,000	1,022,000	124,000	1,688,000	9.

OUTCOME 2: Eliminate POPs stockpiles and reduce the use and release of initial and newly listed POPs	**MAE**	**62000**	**GEF**	72200	Equipment and Furniture	11,333	33,000	33,000	44,000	-	121,333	10.
				72500	Supplies	2,000	2,000	2,000	2,000	2,000	10,000	
				72600	Grants	-	-	36,000	90,000	54,000	180,000	11.
				74200	Audio Visual & Print Prod Costs	-	15,000	30,000	30,000	-	75,000	12.
				75700	Training, Workshops and Confer	6,000	23,830	23,830	5,915	-	59,575	13.
				72300	Other materials & goods	2,000	2,000	2,000	2,000	2,000	10,000	
					sub-total GEF	**240,963**	**549,110**	**841,109**	**1,497,194**	**339,624**	**3,468,000**	
					Total Outcome 2	**240,963**	**549,110**	**841,109**	**1,497,194**	**339,624**	**3,468,000**	
COMPONENT/ OUTCOME 3: Reduce the use and releases of mercury from priority sectors	**MAE**	**62000**	**GEF**	71200	International Consultants	115,000	55,000	153,884	70,000	-	393,884	14.
				71300	Local Consultants	230,675	399,324	330,324	227,324	133,669	1,321,316	15.
				71400	Contractual Services - Individ	27,806	27,806	27,806	27,806	27,806	139,030	16.
				71600	Travel	32,702	32,702	32,702	32,702	32,702	163,510	
				72100	Contractual Services-Companies	35,000	63,000	197,000	85,000	10,000	390,000	17.
				72200	Equipment and Furniture	11,333	248,927	-	-	-	260,260	18.
				72500	Supplies	2,000	2,000	2,000	2,000	2,000	10,000	
				72600	Grants	-	100,000	150,000	-	-	250,000	19.
				74200	Audio Visual & Print Prod, Costs	-	40,000	25,000	15,000	-	80,000	20.
				75700	Training, Workshops and Confer	9,000	46,000	90,000	105,000	30,000	280,000	21.
				72300	Other materials & goods	2,000	2,000	2,000	2,000	2,000	10,000	
					sub-total GEF	**465,516**	**1,016,759**	**1,010,716**	**566,832**	**238,177**	**3,298,000**	
					Total Outcome 2	**465,516**	**1,016,759**	**1,010,716**	**566,832**	**238,177**	**3,298,000**	
COMPONENT/ OUTCOME 4: KM and M&E Raise awareness, ensure	**MAE**	**62000**	**GEF**	71200	International Consultants	-	-	38,000	-	59,000	97,000	22.
				71300	Local Consultants	76,207	60,072	65,572	60,071	48,613	310,535	23.
				71400	Contractual Services - Individ	-	-	5,000	-	-	5,000	
				74100	Professional Services	5,000	5,000	5,000	5,000	5,000	25,000	

project monitoring and disseminate project results and experiences				74200	Audio Visual & Print Prod, Costs	-	4,200	6,300	4,200	6,300	21,000	
				75700	Training, Workshops and Confer	6,293	1,293	1,293	16,293	16,293	41,465	24.
				73100	Rental & Maintenance-Premises	4,000	4,000	4,000	4,000	4,000	20,000	
					sub-total GEF	**91,500**	**74,565**	**125,165**	**89,564**	**139,206**	**520,000**	
					Total Outcome 5	**91,500**	**74,565**	**125,165**	**89,564**	**195,206**	**520,000**	
PROJECT MANAGEMENT	**MAE**	**62000**	**GEF**	71400	Contractual Services - Individ	11,483	11,483	11,483	11,483	11,483	57,415	25.
				73100	Rental & Maintenance-Premises	2,800	2,800	2,800	2,800	2,800	14,000	
				74596	Direct Project Costs (DPC)	49,888	66,517	83,146	66,517	66,517	332,585	26.
					sub-total	**64,171**	**80,800**	**97,429**	**80,800**	**80,800**	**404,000**	
					Total Management	**64,171**	**80,800**	**97,429**	**80,800**	**80,800**	**404,000**	
					PROJECT TOTAL	**974,168**	**2,086,037**	**2,270,905**	**2,323,287**	**835,603**	**8,490,000**	

Summary of Funds:

	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Total
GEF	**$ 974,168**	**$ 2,086,037**	**$ 2,270,905**	**$ 2,323,287**	**$ 835,603**	**$ 8,490,000**
Donor 2 (e.g., UNDP	$	$	$	$	$	$
Donor 3 (cash and in-kind) e.g., Government	$ 4,591,247	$ 9,917,951	$ 10,859,213	$ 11,152,545	$ 4,050,472	$ 40,571,428
TOTAL	**$ 5,565,415**	**$ 12,003,988**	**$ 13,130,118**	**$ 13,475,832**	**$ 4,886,075**	**$ 49,061,428**

Budget Notes:

For a detailed overview of the budget, kindly refer to the detailed budget, which is available through the national PPG team. Outputs listed below refer to the Detailed Project Results Framework – See Annex W)

1. **International Consultants** for capacity building of 10 institutions to improve the monitoring of Hg, POPs and products containing POPs and Hg through tailored training workshops (Output 1.1.8).

2. **Local Consultants** for Output 1.1.11 Capacity building of two (2) analytical laboratories enabling them to comply with the National Accreditation Service requirements; Output 1.2.14 Revision/development of nine (9) tools (guidelines, standards, methodologies, etc.) for the management of chemicals of concern; Output 1.2.17 Development of two (2) national plans for the replacement of POPs or Hg containing projects and the management of POPs or Hg containing wastes; and, Output 1.2.18 Development of two (2) Industry incentives (and proposed for implementation) that support conversion to processes which pose less risks and result in less harmful products.

3. **Equipment and Furniture** to support Output 1.1.11 Capacity building of two (2) analytical laboratories increased enabling them to comply with the National Accreditation Service requirements; and office equipment to support the functioning of the project team.

4. **Audio Visual & Print Prod. Costs** for Output 1.2.14 Printing, design and production of nine (9) tools (guidelines, standards, methodologies, etc.) for the management of chemicals of concern; and Output 1.2.17 Printing, design and production of two (2) national plans for the replacement of POPs or Hg containing projects and the management of POPs or Hg containing wastes.

5. **Training, Workshops and Conferences** to support the organization of trainings, workshops and conference as part of Output 1.1.8 Capacity building of 10 institutions to improve the monitoring of Hg, POPs and products containing POPs and Hg through tailored training workshops; Output 1.1.11 Increasing capacity of two (2) analytical laboratories enabling them to comply with the National Accreditation Service requirements; and, 1.2.4 Revision and/or development of three (3) Ministerial Agreements to address the LCM of Chemicals and submitted for approval.

6. **International Consultants** to support Output 2.1.4 One (1) In-depth inventory (incl. characteristics of the impacted (work) population and gender dimensions) of "old" and "new" POPs pesticides, non-POPs pesticides, pesticide contaminated sites and storage facilities completed in partnership with AGROCALIDAD/INNOVAGRO and APCSA; and Output 2.3.1 Thirty (30) people trained on how to conduct baseline assessments for new POPs and measure new POPs reductions.

7. **Local Consultants** to support Outputs 2.2.2; 2.2.4; 2.2.6; 2.2.8; and, 2.2.10 in conducting assessments of 5 UPOPs generating processes and the preparation of BEP/BAT recommendations; Output 2.3.5 A Cost-Benefit Analysis and Cost-of-Inaction assessment conducted (incl. identification and quantification of differentiated social benefits and costs between women and men) to inform the selection of alternatives and waste management/treatment options for the top 2 priority POPs containing products; costs for the Senior Technical Expert on UPOPs and Pesticides, Senior Technical Expert on POPs and Hg in products, ASGM expert, Communications Assistant, Senior Technical support consultant, Junior Technical support consultant, Project Technical support consultant and Technical support consultant.

8. **Contractual Services – Individual** to support part of the costs for the project's Project Coordinator and Administrative Financial Assistant.

9. **Contractual Services-Companies** to support the following Outputs: 2.1.4 One (1) In-depth inventory (incl. characteristics of the impacted (work) population and gender dimensions) of "old" and "new" POPs pesticides, non-POPs pesticides, pesticide contaminated sites and storage facilities completed in partnership with AGROCALIDAD/INNOVAGRO and APCSA; 2.1.8 At least 30 tonnes of obsolete pesticides repacked, transported and disposed of at a licensed treatment/disposal facility; 2.1.18 Clean up or remediation of at least one (1) pesticide contaminated site completed; 2.1.23 Empty pesticide container collection, transportation, recycling and disposal increased by 90 tonnes; 2.2.18 Clean up or remediation of at least one (1) UPOPs contaminated site completed; 2.3.2 Ten (10) imported products suspected of containing new POPs (PFOs/c-otaBDE) analyzed to verify the existence of new POPs; and 2.3.7 Phase-down and waste management of top two (2) priority POPs containing products demonstrated.

10. **Equipment and Furniture** to support Output 2.1.23 Equipment procurement and the procurement of office equipment and furniture to support the functioning of the project team.

11. **Grants** to support the implementation of project Output 2.2.12 BEP/BAT introduced to reduce UPOPs releases at two (2) project sites /facilities, making use of the Competitive Funding Mechanism (CFM).

12. **Audio Visual & Print Prod. Costs** to finance the printing, design and production of the UPOPs assessment completed as part of Outputs 2.2.2; 2.2.4; 2.2.6; 2.2.8; and, 2.2.10.

13. **Training, Workshops and Conferences** to support Output 2.1.4 One (1) In-depth inventory (incl. characteristics of the impacted (work) population and gender dimensions) of "old" and "new" POPs pesticides, non-POPs pesticides, pesticide contaminated sites and storage facilities completed in partnership with AGROCALIDAD/INNOVAGRO and APCSA; and Output 2.3.1 Thirty (30) people trained on how to conduct baseline assessments for new POPs and measure new POPs reductions.

14. **International Consultants** to support Output 3.1.14 350 ASGM miners and mining communities trained (of which at least 30% are women, and 10% are indigenous) through monthly training events in ore analysis, recovery of minerals by gravimetric concentration methods, legislation, formalization, access to finance/existing financial incentives, tailing management, site remediation, among else; Output 3.2.4 Comprehensive national mercury baseline assessment (including identification of types of mercury containing products in use) completed for medical devices and lighting products, and assessment conducted on impact on women/men; Output 3.2.14 Phase-in of mercury-free alternatives piloted in 1 high profile HCF facility, through awareness raising, training (at least 50% of staff trained are women) and adapting procurement practices (incl. evaluation and use of alternatives by healthcare staff, selection and procurement of mercury-free medical products and development of tailored product switch protocols); and Output 3.2.17 Electricity sector pilot project implemented to support the phase-out and/or improved management of spent mercury containing lamps.

15. **Local Consultants** to support Output 3.1.2 Comprehensive mercury baseline assessment (incl. sex disaggregated and gender specific data) completed for all ASGM project sites (Camilo Ponce Enríquez, Portovelo and Paquisha) at a non-industrial level; Output 3.1.9 Mobile training plant installed at "home base" location and operationalized; Output 3.1.20 At least 5 processing plants (at least 2 occasionally used by women) supported in improving their ore processing (e.g. introduction of gravimetric concentration methods, improved tailings and water management, among other interventions); Output 3.1.24 At least 3 mining groups (of which 1 containing women miners) supported in their formalization processes; Output 3.1.26 Demonstration pilot focusing on gravity recovery of Hg from contaminated tailings implemented; Output 3.2.5 List of available alternatives for Hg containing medical devices and Hg containing lighting products identified (incl. assessment of their costs and benefits); Output 3.2.7 Assessment concluded of existing disposal and treatment options (national/international level) for mercury containing products and their wastes; Output 3.2.9 A Cost-Benefit Analysis and Cost-of-Inaction assessment (incl. identification and quantification of differentiated social benefits and costs between women and men) conducted to inform the selection of mercury-free alternatives and waste management/treatment options; Output 3.3.13 One (1) competitive funds mechanism (CFM) (that includes soft criteria that stimulate innovative youth/women entrepreneurship and association) established to finance five (5) environmental and social entrepreneurships and technology innovations within the ASGM sector and two (2) within the industry sector; Output 3.3.13 One (1) competitive funds mechanism (CFM) (that includes soft criteria that stimulate innovative youth/women entrepreneurship and association) established to finance five (5) environmental and social entrepreneurships and technology innovations within the ASGM sector and two (2) within the industry sector; Output 3.3.17 At least 2 plants (1 ASGM processing plants and 1 industry) have made use of existing tax incentives to finance cleaner production systems; Output 3.3.21 Responsibly produced gold (10 % produced by women) by a project beneficiary purchased at a higher price by a public or private legal buyer; costs for the Senior Technical Expert on UPOPs and Pesticides, Senior Technical Expert on POPs and Hg in products, ASGM expert, Communications Assistant, Senior Technical support consultant, Junior Technical support consultant, Project Technical support consultant and Technical support consultant.

16. **Contractual Services – Individuals** to support part of the costs for the project's Project Coordinator.

17. **Contractual Services-Companies** to support Output 3.1.9 Mobile training plant installed at "home base" location and operationalized; Output 3.2.4 Comprehensive national mercury baseline assessment (including identification of types of mercury containing products in use) completed for medical devices and lighting products, and assessment conducted on impact on women/men; Output 3.2.21 The environmentally sound treatment/disposal of 10 tonnes of mercury containing waste products demonstrated; and Output 3.3.4 At least one (1) financial entity has developed/improved a product that serves the ASGM sector and includes soft criteria that promote the formalization and association of women/youth, the legalization of land, and women entrepreneurship in ASGM.

18. **Equipment and Furniture** to support Output 3.1.9 Mobile training plant installed at "home base" location and operationalized and the procurement of office equipment and furniture to support the functioning of the project team.

19. **Grants** to support Output 3.3.13 One (1) competitive funds mechanism (CFM) (that includes soft criteria that stimulate innovative youth/women entrepreneurship and association) established to finance five (5) environmental and social entrepreneurships and technology innovations within the ASGM sector and two (2) within the industry sector.

20. **Audio Visual & Print Prod. Costs** to support Output 3.1.14 350 ASGM miners and mining communities trained (of which at least 30% are women, and 10% are indigenous) through monthly training events in ore analysis, recovery of minerals by gravimetric concentration methods, legislation, formalization, access to finance/existing financial incentives, tailing management, site remediation, among else; and Output Printing, design and production for mercury, HG in products, ASGM baseline assessment, cost benefits analyses and awareness raising materials.

21. **Training, Workshops and Conferences** to support Output 3.1.2 Comprehensive mercury baseline assessment (incl. sex disaggregated and gender specific data) completed for all ASGM project sites (Camilo Ponce Enríquez, Portovelo and Paquisha) at a non-industrial level; Output 3.1.14 350 ASGM miners and mining communities trained (of which at least 30% are women, and 10% are indigenous) through monthly training events in ore analysis, recovery of minerals by gravimetric concentration methods, legislation, formalization, access to finance/existing financial incentives, tailing management, site remediation, among else; Output 3.1.20 At least 5 processing plants (at least 2 occasionally used by women) supported in improving their ore processing (e.g. introduction of gravimetric concentration methods, improved tailings and water management, among other interventions); and Output 3.2.4 Comprehensive national mercury baseline assessment (including identification of types of mercury containing products in use) completed for medical devices and lighting products, and assessment conducted on impact on women/men.

22. **International Consultants** to conduct the Independent Mid-term Review (MTR); updating of the Terminal GEF Tracking Tool updated; and conducting 1 Independent Terminal Evaluation.

23. **Local Consultants** to support the Translation of 5 PIRs; Translation of the MTR and TE; salary costs of the Monitoring Assistant, Senior technical support consultant, Administrative technical support consultant, Project technical support consultant, Technical support consultant, and Junior Technical support consultant.

24. **Training, Workshops and Conferences** to support Output 4.1.5 Awareness of a total of ~11,718 project beneficiaries (3,515 female and 8,203 male) raised on the management of chemicals (through workshops, training and dissemination of awareness raising materials as part of comp. 1, 2 and 3); Organize the project's Inception Workshop; and, organize 10 Project Board meetings.

25. **Contractual Services** – Individuals to support part of the costs for the project's Administrative Financial Assistant.

26. **Direct Project Costs** – DPC. Kindly refer to Annex Q for a detailed overview of DPC costs.

X. LEGAL CONTEXT

This document together with the CPAP signed by the Government and UNDP which is incorporated herein by reference, constitute together a Project Document as referred to in the Standard Basic Assistance Agreement (SBAA); as such all provisions of the CPAP apply to this document. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner", as such term is defined and used in the CPAP and this document.

Consistent with the Article III of the Standard Basic Assistance Agreement (SBAA), the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;

b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document [and the Project Cooperation Agreement between UNDP and the Implementing Partner][25].

The Implementing Partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www,un,org/sc/committees/1267/aq_sanctions_list,shtml. This provision must be included in all sub-contracts or sub-agreements entered into under/further to this Project Document".

Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

[25] Use bracketed text only when IP is an NGO/IGO

XI. MANDATORY ANNEXES

A. Multi year Workplan.
B. Monitoring Plan.
C. Evaluation Plan.
D. GEF SEC and STAP comments.
E. GEF Tracking Tool at baseline.
F. Terms of Reference for Project Board, Project Coordinator, Administrative-Financial Assistant.
G. UNDP Social and Environmental and Social Screening Template (SESP).
H. UNDP Project Quality Assurance Report.
I. UNDP Risk Log.
J. Results of the capacity assessment of the project implementing partner (MAE)
K. MAE Final Risk Log
L. Baseline Assessments performed at PPG Phase (including: Annex L1 – POPs baseline; Annex L2 – ASGM Mercury Baseline; Annex L3 – Mercury in Products Baseline; Annex L4A - Laboratories Assessment Report; Annex L4B - Laboratories survey results; Annex L5A - Finance Mechanisms Strategy; Annex L5B - Summary of Financial Mechanisms; Annex L5C - Overview Mining loans; Annex L6 - Regulatory Framework Analysis; Annex L7 - Socio-Economic Analysis)
M. Co-financing letters.
N. GEF OFP letter.
O. GEF PIF.
P. LOA with the Government.
Q. Detailed overview of DPC costs.
R. List of people consulted during project development.
S. Gender Analysis and Strategy.
T. Knowledge Management Strategy.
U. Estimate of the number of project beneficiaries.
V. Detailed Project Results Framework.

ANNEX A: MULTI YEAR WORK PLAN:

Outputs listed below refer to the Detailed Project Results Framework – See Annex W). Task in bold are those taken up in the General PRF (see Chapter V).

Task	Description	Responsible Partner	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.1.1	**2 capacity building plans and 2 financial plans developed to improve national reporting on POPs and Hg statistics/indicators**	NC, PT																				
1.1.2	TOR, management arrangements, procedures drafted for ICM and working groups	NC, PT																				
1.1.3	Capacity of ICM and its working groups built through the training of twenty (20) people	NC, PT																				
1.1.4	**Interagency Coordinating Mechanism (ICM) and its working groups established**	NC, PT																				
1.1.5	Fifty (50) inspectors trained on how to implement the new norms, regulations or technical guidelines developed by the project	IC, NC, PT																				
1.1.6	Thirty (30) people trained in early warning systems and emergency response procedures	IC, NC, PT																				
1.1.7	70 Gov./Institutions staff trained on how to undertake a CBA and CoI assessment for priority chemicals and C&W monitoring	IC, NC, PT																				
1.1.8	**Capacity built of 10 institutions to improve the monitoring of Hg, POPs and products containing POPs and Hg through tailored training workshops**	IC, NC, PT																				
1.1.9	Analytical laboratory capacity assessed for the monitoring of hazardous substances and wastes in environmental media and biological samples	NC, PT																				
1.1.10	Capacity building plan developed and implemented for the strengthening of 2 analytical laboratories to analyze chemicals of concern.	NC, PT																				
1.1.11	**Capacity of 2 analytical laboratories increased.**	NC, PT																				
1.2.1	1 Ministerial Agreement to address POPs and Hg in products revised and/or developed.	NC, PT																				
1.2.2	1 Ministerial Agreement to address UPOPs revised and/or developed.	NC, PT																				
1.2.3	1 Inter-ministerial agreement drafted for the establishment of the ICM and its Working Groups.	NC, PT																				
1.2.4	**3 Ministerial Agreements to address the LCM of**	NC, PT																				

	Chemicals revised and/or developed and submitted for approval.																					
1.2.5	1 guideline developed/revised on BEP/BAT for medical waste treatment to reducing UPOPs releases.	NC, PT																				
1.2.6	1 guideline developed/revised on the identification, use, production and assembly, safe storage, packaging, transportation, data management, inspection/monitoring and final disposal of POPs-containing wastes and products.	NC, PT																				
1.2.7	One (1) guideline developed/revised on the identification, safe storage, packaging, transportation, data management, inspection/monitoring and final disposal of Hg-containing wastes and products.	NC, PT																				
1.2.8	1 national guidelines developed for the management and phase-out of mercury containing products in the health and lighting sector.	NC, PT																				
1.2.9	1 guideline revised on the management of obsolete pesticides revised/updated.	NC, PT																				
1.2.10	1 guideline developed/revised on the identification, management and remediation of POPs/UPOPs contaminated sites.	NC, PT																				
1.2.11	1 guidance document developed/revised on the management of solid and liquid waste and air emissions generated by gold/ore processing plants.	NC, PT																				
1.2.12	1 Maximum Permissible Limit standard developed/revised for the discharge of effluents and sludge products from mineral processing activities.	NC, PT																				
1.2.13	1 guidance document on the preparation of a mine closure plan (incl. remediation) developed/revised (and approved by government).	NC, PT																				
1.2.14	**Nine (9) demon (guidelines, standards, methodologies, etc.) for the management of chemicals of concern revised/developed.**	NC, PT																				
1.2.15	National plan developed for the replacement of POPs containing products and management of POPs containing wastes.	NC, PT																				
1.2.16	National plan developed for the replacement of	NC, PT																				

	mercury containing medical products and management of mercury containing generated waste.																						
1.2.17	**Two (2) national plans developed for the replacement of POPs or Hg containing products and the management of POPs or Hg containing wastes.**	NC, PT																					
1.2.18	**Two (2) Industry incentives developed and proposed for implementation that support conversion to processes which pose less risks and result in less harmful products.**	NC, PT																					
2.1.1	Sixty (60) people (42 men and 18 females) trained (incl. gender sensitization module) on how to conduct a POPs/obsolete pesticide inventory (*incl. the identification of pesticide-contaminated sites*).	IC, PT, PS Company																					
2.1.2	Awareness raised of 2,400 farmers/farms/distributors on the reporting, management and disposal of obsolete pesticides (to support obsolete pesticide inventory).	IC, PT, PS Company																					
2.1.3	**One (1) In-depth inventory (incl. characteristics of the impacted (work) population and gender dimensions) of "old" and "new" POPs pesticides, non-POPs pesticides, pesticide contaminated sites and storage facilities completed in partnership with AGROCALIDAD/INNOVAGRO and APCSA.**	IC, PT, PS Company																					
2.1.4	Agreement signed with a state institution that will be responsible for identifying and making available to the project a temporary storage facility for POPs and non-POPs pesticides.	PT, Government																					
2.1.5	Request for Proposals (RFP) launched for the collection, transportation and treatment/disposal of 30 tonnes of obsolete pesticides.	PT																					
2.1.6	Bids assessed and collection/transportation and treatment entity selected.	PT																					
2.1.7	One (1) local transportation company and personnel (30% women and 70% men) of four (4) centralized temporary storage centers[26] trained in the safe repacking and transportation of obsolete pesticides (incl. gender sensitization	PT, PS Company																					

[26] APCSA has 4 and INNOVAGRO has 2 temporary centralized storage facilities for plastics contaminated with agrochemicals. All of them have environmental permits. These temporary storage facilities could be used by the project for the temporary storage of obsolete pesticides before disposal. INIAP, MAGAP and UNA temporary storage facilities could also be considered.

	module).																					
2.1.8	**At least 30 tonnes of obsolete pesticides repacked, transported and disposed of at a licensed treatment/disposal facility.**	PT, PS Company																				
2.1.9	Case study report on the identification, collection, repackaging, transportation and disposal of obsolete pesticides prepared and disseminated.	PT, PS Company																				
2.1.10	Facilities of 4 large pesticide-related companies[27] assessed to identify contaminated sites and assess container-rinsing facilities (incl. characteristics of the impacted (work) population and gender dimensions).	PT, PS Company																				
2.1.11	**Recommendation to reduce environmental impact from pesticide container rinsing introduced at one (1) pesticide related company.**	PT, PS Company																				
2.1.12	Case study report on improved pesticide container rinsing practices prepared and disseminated.	PT, PS Company																				
2.1.13	At least one (1) pesticide contaminated site selected for clean up or remediation.	PT, PS Company																				
2.1.14	Type and level of contamination of contaminated site(s) analyzed by laboratory.	PT, laboratories																				
2.1.15	Clean up or remediation plan(s) for the contaminated site(s) developed and approved.	PT, PS Company																				
2.1.16	Request for Proposals (RFP) launched for the clean up or remediation of at least one (1) pesticide contaminated site.	PT																				
2.1.17	Bids assessed and clean up or remediation entity selected.	PT																				
2.1.18	**Clean up or remediation of at least one (1) pesticide contaminated site completed.**	PT, PS Company																				
2.1.19	Case study report on the remediation of the contaminated site prepared and disseminated.	PT, PS Company																				
2.1.20	Technical specifications prepared for equipment that will allow an increase in the collection, recycling and disposal of pesticide containers by 90 tonnes.	PT, PS Company																				

[27] Aerial spraying and terrestrial spraying sites or old storage sites belonging MAGAP, Agrocalidad, INIAP, MSP, or others.

2.1.21	Equipment procured.	PT																				
2.1.22	30 APCSA and INNOVAGRO staff (21 men and 9 female) trained in the use of new equipment (incl. gender sensitization module).	PT, PS Company																				
2.1.23	**Empty pesticide container collection, transportation, recycling and disposal increased by 90 tonnes.**	PT, PS Company																				
2.1.24	Case study report on the collection, recycling and disposal of pesticide containers prepared and disseminated.	PT, PS Company																				
2.2.1	Thirty (30) people (21 men and 9 female) trained (incl. gender sensitization module) on how to conduct UPOPs baselines, measure UPOPs reductions.	PT, NC																				
2.2.2	**Assessment of UPOPs generating processes *(treatment of leachate, sludge, biogas, incineration of medical waste and animal carcasses)* completed at one (1) GAD[28] landfill site.**	PT, NC																				
2.2.3	Recommendations prepared for BEP/BAT interventions at the GAD landfill site to reduce UPOPs releases.	PT, NC																				
2.2.4	**Assessment of UPOPs generating processes and soil contamination[29] concluded at the country's two (2)[30] most polluting incineration/recycling facilities.**	PT, NC																				
2.2.5	Recommendations prepared for BEP/BAT interventions at two (2) incineration/recycling facilities to reduce UPOPs releases.	PT, NC																				
2.2.6	**Assessment of UPOPs generating processes conducted at one (1) pesticide container recycling facility.**	PT, NC																				
2.2.7	Recommendations prepared for BEP/BAT interventions at the pesticide container recycling facility to reduce UPOPs releases.	PT, NC																				
2.2.8	**Assessment of two (2) UPOPs releasing medical waste treatment facilities concluded.**	PT, NC																				
2.2.9	Recommendations prepared for BEP/BAT	PT, NC																				

[28] Autonomous decentralized government (ADG) - GAD (acronym in Spanish).

[29] Soil contamination assessment with be limited to the two scrap metal recyclers, ADELCA, ANDEC and NOVACERO

[30] For example: HAZWAT, INCINEROX, GADERE, ADELCA, NOVACERO, ECUAMBIENTE, UNACEM, HOLCIM, a member of AEXPALMA or Sugar cane/rice producers

	interventions at two (2) medical waste treatment facilities to reduce UPOPs releases.																						
2.2.10	**Assessment of UPOPs generating agricultural practices conducted of 5.500 hectares cultivated with rice/sugarcane/corn.**	PT, NC																					
2.2.11	Recommendations on BEP/BAT interventions in agriculture to reduce UPOPs releases.	PT, NC																					
2.2.12	**BEP/BAT introduced to reduce UPOPs releases at two (2) project sites/facilities.**	PT, NC																					
2.2.13	Seven (7) Case study reports on UPOPs assessment and BAT/BEP introduction at project entities prepared and disseminated incl. overview of the participation, empowerment and improvement of work/living conditions for men/women.	PT, NC																					
2.2.14	At least one (1) UPOPs contaminated site selected for clean up or remediation.	PT, NC																					
2.2.15	Clean up or remediation plan(s) for the contaminated site(s) developed and approved.	PT, NC																					
2.2.16	Request for Proposals (RFP) launched for the clean up or remediation of at least one (1) UPOPs contaminated site.	PT																					
2.2.17	Bids assessed and clean up or remediation entity selected.	PT																					
2.2.18	**Clean up or remediation of at least one (1) UPOPs contaminated site completed.**	PT, PS Company																					
2.2.19	Case study report on the clean up or remediation of the UPOPs contaminated site prepared and disseminated.	PT, PS Company																					
2.3.1	Thirty (30) people trained on how to conduct baseline assessments for new POPs and measure new POPs reductions.	PT, IC																					
2.3.2	**Ten (10) imported products [31] suspected of containing new POPs (PFOs/c-otaBDE) analyzed to verify the existence of new POPs.**	PT, IC, Laboratories																					
2.3.3	Top two (2) products of concern selected for further assessment.	PT, IC, Laboratories																					
2.3.4	List with potential alternatives for top two (2) POPs containing products identified (incl. assessment of the costs and benefits of	PT, IC																					

[31] ABS, high impact polystyrene with ABS, treated leather, etching agents: ferric chloride, aviation hydraulic fluids, insecticides, flame retardants.

	alternatives during their life cycle).																					
2.3.5	**A Cost-Benefit Analysis and Cost-of-Inaction assessment conducted** (incl. identification and quantification of differentiated social benefits and costs between women and men) **to inform the selection of alternatives and waste management/treatment options for the top 2 priority POPs containing products.**	PT, NC																				
2.3.6	List with cost-effective and available alternatives made available to project partners.	PT, NC																				
2.3.7	Phase-down (with SENAE) and waste management of top two (2) priority POPs containing products demonstrated in selected sectors/areas.	PT, PS companies																				
3.1.1	Six (6) people trained in how to undertake pre-project Hg baselines assessments, measure post-project Hg reductions for all projected project interventions, and measure the participation, empowerment and improvement of work/living conditions of men/women.	PT, NC																				
3.1.2	**Comprehensive mercury baseline assessment** (incl. sex disaggregated and gender specific data[32]) **completed for all ASGM project sites** (Camilo Ponce Enríquez, Portovelo and Paquisha) **at a non-industrial level.**	PT, NC																				
3.1.3	Locations where a mobile training plant can be temporarily installed/showcased identified.	PT, NC																				
3.1.4	Permitting requirements for long-term installation and short-term demonstration of the mobile training plant investigated.	PT, NC																				
3.1.5	Memorandum of Understanding (MoU) drawn up and signed by mobile plant host(s) (if required).	PT, NC																				
3.1.6	Technical specifications for mobile training plant equipment prepared.	PT, NC, IC																				
3.1.7	Equipment and spare parts for mobile training plant procured.	PT																				
3.1.8	Use of the mobile training plant demonstrated in at least all of the 3 project locations.	PT, NC, IC																				
3.1.9	**Mobile training plant installed at "home base" location and operationalized.**	PT, NC, IC, PS company																				

[32] Sex, age, ethnicity, levels education, main diseases, family income, population characteristics, heads of households, time use, family members' roles, among other relevant data.

3.1.10	Case study reports on use of the mobile training plant in various locations prepared and disseminated.	PT, NC, IC																				
3.1.11	Training materials and awareness raising materials (e.g. posters, training videos) for the capacity building of Artisanal and Small Scale miners prepared. Training materials should be aligned with local family realities, promote positive actions towards the role and involvement of women in family income generating activities and family finances, respect communities' ethnicity, miners/women's time availability, cultural practices, etc.	PT, NC, IC																				
3.1.12	Training materials made available through existing knowledge exchange platforms[33].	PT																				
3.1.13	Training of 10 trainers [34] (including 2 semi-permanent on-site ASGM experts) to support the operation of the mobile training plant, conduct monthly training events and assist processing plants in introducing gravimetric concentration methods.	PT, IC																				
3.1.14	**350 ASGM miners and mining communities trained** (of which at least 30% are women, and 10% are indigenous) **through monthly training events in ore analysis, recovery of minerals by gravimetric concentration methods, legislation, formalization, access to finance/existing financial incentives, tailing management, site remediation, among else.**	PT, IC, NC																				
3.1.15	Quality of training assessed by conducting exit polls for each training event.	PT, NC																				
3.1.16	(five) 5 mining operations/plants (at least 2 used by women) located in the project's priority sites identified and selected that are interested in participating in a business case analysis and improving their ore processing.	PT, NC																				
3.1.17	Economic/business case analysis completed for 5 selected mining operations/processing plants (at least 2 used by women) to identify potential financial gains.	PT, NC																				

[33] For example – the Knowledge Management platform to be established for GEF GOLD, Swiss ASG – IKH, old CASM site.

[34] Ministry of Mines suggest that the trainers should be differentiated in the following manner: 2 metallurgy trainers; 2 environmental issues trainers; 2 trainers in geology; 2 trainers in mining issues and 2 trainers in social issues and application to financing mechanisms

3.1.18	Assessment concluded on sound ways to dispose of mining tailing produced by processing facilities supported by the project.	PT, NC																				
3.1.19	**At least 5 processing plants** (at least 2 occasionally used by women) **supported in improving their ore processing (e.g. introduction of gravimetric concentration methods, improved tailings and water management, among other interventions).**	PT, NC																				
3.1.20	Women's mining groups supported in exchanging experiences in ASGM.	PT, NC																				
3.1.21	Tailored support provided to women miners (Jancheras) to improve ore processing.	PT, NC																				
3.1.22	Case study reports on each of the processing plants supported by the project prepared and disseminated.	PT, NC																				
3.1.23	Mining groups interested in formalization, or in the process of formalization, identified.	PT, NC																				
3.1.24	**At least 3 mining groups[35]** (of which 1 containing women miners) **supported in their formalization processes.**	PT, NC																				
3.1.25	Case study reports on each of the mining groups supported in their formalization process prepared and disseminated.	PT, NC																				
3.1.26	Tailing site characterization and analysis conducted in order to select the tailing sites that are contaminated with Hg.	PT, NC																				
3.1.27	**Demonstration pilot focusing on gravity recovery of Hg from contaminated tailings implemented.**	PT, NC																				
3.1.28	Case study report on demonstration pilot focusing on gravity recovery of tailings contaminated with Hg prepared and disseminated.	PT, NC																				
3.1.29	Comprehensive post-project Hg reductions determined for all project sites.	PT, NC																				
3.2.1	Guidance developed for the identification of products containing mercury and the quantification of waste generated containing mercury.	PT, IC																				
3.2.2	Fifteen (15) people trained on how to undertake	PT, IC																				

[35] One in each of the project's locations. A mining group can be a mining company, a mining cooperative, a cohesive society group an association (jancheras).

	mercury baseline assessments for mercury containing products and record post-intervention mercury reductions achieved by the project.																					
3.2.3	SUIA software module developed to capture baseline information related to products containing mercury.	PT, NC																				
3.2.4	**Comprehensive national mercury baseline assessment** (including identification of types of mercury containing products in use) **completed for medical devices and lighting products, and assessment conducted on impact on women/men.**	PT, IC, PS company																				
3.2.5	**List of available alternatives for Hg containing medical devices and Hg containing lighting products identified (incl. assessment of their costs and benefits).**	PT, NC																				
3.2.6	List with cost-effective and available alternatives for Hg containing medical devices and Hg containing energy saving lamps made available to project partners.	PT, NC																				
3.2.7	**Assessment concluded of existing disposal and treatment options (national/international level) for mercury containing products and their wastes.**	PT, NC																				
3.2.8	List with existing disposal and treatment options (national/international level) for mercury containing products and their wastes made available to project partners.	PT, NC																				
3.2.9	**A Cost-Benefit Analysis and Cost-of-Inaction assessment** (incl. identification and quantification of differentiated social benefits and costs between women and men) **conducted to inform the selection of mercury-free alternatives and waste management/treatment options.**	PT, NC																				
3.2.10	Three (3) HCF facilities selected to demonstrate the phase-out/down of mercury containing medical devices, based on selection criteria agreed upon with MSP.	PT, NC																				
3.2.11	Mercury baseline assessments for selected project HCFs (public and/or private) completed and procurement practices for mercury containing and mercury-free products reviewed.	PT, NC, IC																				

3.2.12	Awareness raising (e.g. posters) and gender sensitive training materials for HCFs developed in partnership with the MSP and made widely available.	PT, NC, IC																				
3.2.13	Three (3) plans for the management and replacement of mercury containing medical products developed and adopted for each project HCF.	PT, NC, IC																				
3.2.14	**Phase-in of mercury-free alternatives piloted in 1 high profile HCF facility**, through awareness raising, training (at least 50% of staff trained are women) and adapting procurement practices (incl. evaluation and use of alternatives by healthcare staff, selection and procurement of mercury-free medical products and development of tailored product switch protocols).	PT, NC, IC																				
3.2.15	Gender sensitive awareness raising materials for the lighting sector developed in partnership with the Ministry of Electricity and Renewable Energy (MEER) and Electricity Companies and made widely available.	PT, NC, IC																				
3.2.16	Cost Benefit Analysis for the establishment and operation of a centralized national lamp decontamination/recycling plant conducted.	PT, NC																				
3.2.17	**Electricity sector pilot project implemented to support the phase-out and/or improved management of spent mercury containing lamps.**	PT, IC																				
3.2.18	Ten (10) tonnes of phased-out mercury containing waste products identified.	PT, NC																				
3.2.19	Based on the outcomes of the assessment on existing disposal and treatment options at national and international level a Request for Proposals (RFP) launched for the collection, transportation and treatment/disposal of 10 tonnes of mercury containing wastes.	PT																				
3.2.20	Bids assessed and waste treatment entity(ies) selected.	PT																				
3.2.21	**The environmentally sound treatment/disposal of 10 tonnes of mercury containing waste products demonstrated.**	PT, PS company																				
3.2.22	Case study reports for each major project intervention (mercury substitution in HCFs, phase-out of energy saving lamps in 1 electricity company, 2 disposal demonstrations) prepared	PT, IC, NC, PS company																				

	and disseminated.																					
3.2.23	Comprehensive post-project mercury reductions determined for all project interventions.	PT, NC																				
3.3.1	Based on the financial mechanism assessment conducted during the PPG phase, identify which financial entities would be best fit to participate in the project.	PT, NC																				
3.3.2	At least one (1) financial entity selected to participate in the project.	PT, NC																				
3.3.3	Staff of financial entity(ies) trained in the (re)design of financial products for the ASGM sector (30% of people trained are women).	PT, IC																				
3.3.4	**At least one (1) financial entity has developed/improved a product that serves the ASGM sector** and includes soft criteria that promote the formalization and association of women/youth, the legalization of land, and women entrepreneurship in ASGM.	PT, IC, NC, PS company																				
3.3.5	Strategy for the type of proposals that could be funded under the CFM drafted and approved.	PT, NC																				
3.3.6	Application package (template for proposal, budget and supporting documentation) and monitoring and reporting procedures developed[36].	PT, NC																				
3.3.7	Information on the CFM funding opportunities disseminated at national level.	PT, NC																				
3.3.8	Call for applications posted.	PT, NC																				
3.3.9	Two (2) organizations supported to prepare their application for the CMF, with a focus on women-led entities/groups.	PT, NC																				
3.3.10	Applications assessed from a technical and financial perspective.	PT, NC																				
3.3.11	Grants allocated to selected applications.	PT, NC																				
3.3.12	Proposals implemented and activities reported on.	PT, NC																				
3.3.13	**One (1) competitive funds mechanism (CFM)[37]** (that includes soft criteria that stimulate	PT, NC																				

[36] Methodologies, procedures and monitoring will be applied according to the GEF Small Grants Procedures.

[37] The CFM model is taken from the GEF Small Grants Programme. Methodologies, procedures and monitoring will be applied according SGP application.

	innovative youth/women entrepreneurship and association) **established to finance five (5) environmental and social entrepreneurships and technology innovations within the ASGM sector.**																					
3.3.14	Case study reports on each funded proposal (capturing the experiences and lessons-learned) prepared and disseminated	PT, NC																				
3.3.15	One (1) ASGM processing plant and one (1) industry identified that are suitable to make use of existing tax incentives (linked to 1.2.14).	PT, NC																				
3.3.16	One (1) ASGM processing plant and one (1) industry (supported in introducing cleaner technologies as part of component 2 and 3) supported in applying existing tax incentives in collaboration with the *Internal Revenue Service.*	PT, NC																				
3.3.17	**At least 2 plants (1 ASGM processing plants and 1 industry) have made use of existing tax incentives to finance cleaner production systems.**	PT, NC																				
3.3.18	Two (2) case study reports (capturing the experiences of the processing plant and the industry in obtaining tax incentives) prepared and disseminated.	PT, NC																				
3.3.19	Assessment undertaken to identify opportunities for ASGM miners to sell responsibly produced gold at a higher price.	PT, NC																				
3.3.20	At least one (1) partnership/agreement with legal gold buyers (Bank of Ecuador/refiners (*e.g. Archor*)/Int. initiatives (*e.g. ARM*)[38] negotiated with project support.	PT, NC																				
3.3.21	**Responsibly produced gold (10 % produced by women) by a project beneficiary purchased at a higher price by a public or private legal buyer**.	PT, NC																				
3.3.22	One (1) case study report capturing the project's experience in linking ASGM miners to better buyers markets prepared and disseminated.	PT, NC																				
4.1.1	One (1) awareness raising, training and knowledge management plan developed and implemented that takes gender	PT, NC																				

[38] UNEP already has ongoing partnerships with these entities.

Another option is to extend the scope of the Bank of Ecuador's gold buying incentive to also cover the provinces covered by the project.

	considerations/needs into account.																					
4.1.2	Project website/Facebook page/twitter account established and launched.	PT, NC																				
4.1.3	Gender sensitive awareness raising materials (e.g. web-based presentations, posters, videos) produced (*as part of Comp. 1, 2 and 3*).	PT, NC																				
4.1.4	Gender sensitive training materials produced (*as part of Comp. 1, 2 and 3*).	PT, NC																				
4.1.5	**Awareness of a total of ~11,718 project beneficiaries (3,515 female and 8,203 male) raised on the management of chemicals (through workshops, training and dissemination of awareness raising materials as part of comp. 1, 2 and 3).**	PT, NC																				
4.2.1	**29 of GEF M&E requirements met and adaptive management applied in response to needs and Mid-term Evaluation (MTE) findings.**	PT, NC																				
4.3.1	At least 20 case study reports prepared capturing results and lessons-learned from main project interventions.	PT, NC																				
4.3.2	At least two (2) scientific articles prepared on project experiences and submitted to scientific journals.	PT, NC, IC, PS companies																				
4.3.3	At least five (5) project related news articles featured on websites or in newspapers.	PT, NC																				
4.3.4	One (1) end-of-project report prepared capturing all major project achievements and lessons-learned.	PT, NC																				
4.3.5	All project prepared materials disseminated at national, regional and global level and published on existing long-term KM hubs (e.g. *GEF GOLD KM hub*; http://www.artisanalmining.org//*CASM*; *Swiss funded ASM - IKH*).	PT																				

NC = National Consultants

IC = International Consultants

PT = Project Team

PS Company = Private Sector Company

ANNEX B: MONITORING PLAN

The Project Manager will collect results data according to the following monitoring plan:

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
Project Objective: To protect human health and the environment by adopting the environmentally sound and live cycle management of chemical substances in Ecuador.	**Indicator 1** 2 new partnership mechanisms with funding for sustainable management solutions of natural resources, ecosystem services, chemicals and waste at national level.	1 financial institution and 1 legal gold buyer sign an agreement with the project.	As the project will sign agreements with two entities, copies of these agreements will be available to the Project Coordinator.	Annually Reported in DO tab of the GEF PIR	Project Coordinator	Copy of 2 agreements	It is assumed that copies of the agreements will be directly available to the Project Coordinator.
	Indicator 2 80 new jobs created (24 of jobs for females and 56 of jobs for males) through solutions for management of natural resources, ecosystem services, chemicals and waste.	Jobs that have been created as a direct result of the project (e.g. project consultancies, CFM, ASGM pilot plan operators and trainers).	▪ Consultancy jobs created by the project will be tracked by counting the number of consultancy contracts issued. ▪ Counting the number of jobs to be created by Competitive Fund Mechanism (CFM) grant recipients, by reviewing their proposal and final report. ▪ Count the number of trainers and ASGM training plant operators that are being paid by project partners.	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator ▪ Project Coordinator ▪ National ASGM Expert	▪ Copies of UNDP contracts ▪ Copies of CFM applications that have been approved. ▪ Field Mission Reports provided by the National ASGM Expert	The most challenging data to collect will be the number of jobs created by CFM grant recipients. It is suggested to take up in the CFM application template and reporting template, the number of jobs that will be created as a result of the grant.

	Indicator 3 31,187 direct project beneficiaries (9,356 of females and 21,831 of males) for which the risk of hazardous chemicals and waste has been reduced.	See Annex U for an overview of the expected project beneficiaries, which includes no. of people trained by the project – 706 (and their families members assuming each family consist of 4 – 2,118), number of people living in the ASGM project areas (14,100), people's awareness raised through the communications campaign (9,600) plus direct project beneficiaries 4,663.	▪ Count number of people living in ASGM priority project sites, using the latest census. ▪ Count project beneficiaries that have received training, by using training participants lists. ▪ Count people of whom awareness has been raised as a result of the awareness raising campaign, by using pre- and post- campaign interviews/questionnaires and extrapolation. ▪ Count project beneficiaries that have benefitted from reduced POPs and Hg releases by counting staff of facilities using HR records; counting the number of people living within a 1 km^2 of a cleaned-up contaminated sites (based on average population density),	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator ▪ Project Coordinator ▪ Company engaged to conduct Awareness Campaign. ▪ Project Coordinator, in coordination with national Hg and POPs experts.	▪ Population Census ▪ Training Participation lists. ▪ Final Report of company engaged to conduct Awareness Campaign. ▪ Field and yearly reports prepared by national experts.	The most challenging data to collect will be that of i) people of whom awareness has been raised, and ii) number of direct project beneficiaries. It is suggested to agree on a methodology with the company conducting the awareness campaign on how awareness levels before and after the campaign will be measures. Secondly, prior to implementing a pilot project, national experts and the project coordinator are expected to assess the number of potential beneficiaries and take this number up in their reporting.

Component 1: Strengthen institutional capacity and the regulatory and policy framework for the Sound Management of Chemicals (SMC) based on a Life-Cycle Approach.	***Indicator 1*** Four (4) financial and capacity building plans developed and implemented and capacity of 12 private or public entities increased to enable them to address chemicals of concern.	2 capacity building plans and 2 financial plans will be developed. 1 ICM and its working groups will be established. Capacity built of 10 institutions and two (2) analytical laboratories.	▪ Count number of capacity building plans and financial plans drafted with project support. ▪ Verify when the degree for the establishment of the ICM and its working groups has been issued. ▪ Verify the number of training workshops organized and the number of institutions that participated. ▪ Verify procurement records for laboratory equipment.	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator ▪ Project Coordinator ▪ Project Coordinator ▪ Project Coordinator	▪ Copies of capacity building- and financial plans. ▪ Copy of ICM degree. ▪ Copies of participants' lists from trainings conducted. ▪ Copy of procurement records of laboratory equipment.	The most challenging to measure will be the increase in capacity of institutions (12) that receive project support. It is suggested that a methodology will be agreed upon prior to training events, to determine an increase in capacity before and after project and training interventions.
	Indicator 2 Sixteen (16) policies, regulations and standards to achieve the LCM of chemicals revised and/or developed.	3 Ministerial Agreements and their application guides; 9 tools (guidelines, standards, methodologies, etc.); 2 national plans and 2 Industry incentives will be developed/ revised.	▪ Count number of drafted MAs, tools, national plans and industry incentives developed/revised with project support.	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator	▪ Copies of MAs, tools, national plans and industry incentives.	Very limited risks will hamper the collection of project objective data.
Component 2: Eliminate POPs stockpiles and reduce the use and release of initial and newly listed POPs (including those contained in products).	***Indicator 1*** 120 tonnes of obsolete POPs and non-POPs pesticides and related waste disposed of.	Amount of POPs and non-POPs obsolete pesticides and pesticide contaminated waste and soil soundly disposed of with project support.	▪ In-depth Obsolete Pesticide inventory indicating the quantity and type of OPs identified and the area and depth of pesticide contaminated sites (m^3) and their contamination levels. ▪ The official disposal certificate of the licensed facility that treated/disposed of the obsolete pesticides. ▪ Report of the company engaged to clean-up remediate the contaminated sites, including data on level of contamination, area and depth of contaminated sites, and amount of m^3 cleaned-up/remediated.	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator & Nat. POPs expert ▪ Project Coordinator ▪ Project Coordinator & Nat. POPs expert.	▪ Copy of OP inventory ▪ Copy of disposal certificate ▪ Copy of periodic and final company's reports on contaminated	The data most challenging to obtain will be the increase in the amount of pesticide containers disposed of as a direct result of project support. Prior to the pilot project on empty pesticide containers being implemented, the nat. consultant will be asked to obtain data on container collection and treatment that can be compared with similar data being obtained after pilot

			▪ APCSA and INNOVAGRO yearly reports on collection, recycling and treatment/disposal of empty pesticide containers, and indication of increase in collection/treatment rates as a result of the project.		▪ Project Coordinator & Nat. POPs expert	sites ▪ Copy of disposal certificate	project completion.
	Indicator 2 25 grams TEQ of UPOPs releases reduced.	The indicator is directly linked to the introduction of BEP/BAT at 2 project sites/facilities to reduce UPOPs releases, and the clean up or remediation of at least 1 UPOPs contaminated site.	▪ 3 baseline assessments will be conducted prior to pilot project implementation to determine the baseline releases of UPOPs in the 2 pilot facilities/sites and the extent of UPOPs contamination at the contaminated site, making use of the "*UNEP Toolkit for Identification and Quantification Releases of Dioxins, Furans and other unintentional POPs"*, as well as soil analysis conducted by the 2 laboratories supported by the project to determine the level of UPOPs soil contamination. ▪ The same methodologies will be applied to determine UPOPs releases and UPOPs soil contamination levels after the implementation of pilot projects has been completed.	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator & Nat. POPs expert ▪ Project Coordinator & Nat. POPs expert	▪ Copies of Excel file "*UNEP Toolkit Emission Factors*" for each of the 2 pilot sites/facilities (prior and after project pilots). ▪ Copies of laboratory soil analysis reports.	The data most challenging to obtain will be an exact estimate of the UPOPs release reductions achieved by the project. To address this the project will support the nat. POPs consultant to undertake quality baseline and post-project assessments to determine these releases reductions as accurate as possible.
	Indicator 3 30 tonnes of new POPs releases reduced.	The use of 2 products containing PFOs or C-octaBDE will be reduced by 30 tonnes and their overall management (end-of-life) improved.	▪ Products suspected of containing PFOs or C-octaBDE will be analyzed with the support of the 2 project laboratories to verify the existence of new POPs and the content levels of these POPs. ▪ The project will update the import data on POPs containing products, which was obtained	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator & Nat. POPs expert ▪ Project Coordinator	▪ Copies of laboratory product analysis reports. ▪ Copy of	The most challenging will be to determine, which portion of the reduction in the import/use of POPs containing products is a direct result of the project, and which portion is a result of other national and

			during the PPG phase, to determine the total quantity (and tonnage) of these products being imported. ▪ When the pilot project that aims to reduce the use and import of 2 priority products, will have been completed, import data will once again be updated to determine by how much import (and thus use) of this product have been reduced.		& Nat. POPs expert ▪ Project Coordinator & Nat. POPs expert	updated import data report at project start (to be prepared by nat. POPs expert). ▪ Copy of updated import data report at project end (to be prepared by nat. POPs expert).	international measures. As such it might be easiest to estimate reductions of the products directly targeted by the pilot project, and list reductions of the import/use of other products as a result of regulatory measures supported by the project, separately.
Component 3: Implementation of measure for reduction and elimination of Hg from priority sectors	***Indicator 1*** 2 tonnes of mercury use/releases reduced from ASGM at a non-industrial level.	The reduction in the use of mercury (in tonnes) by the ASGM sector that receives direct or indirect project support, will be recorded as the project's achievement.	▪ Comprehensive mercury baseline assessments (applying the UNEP Level 2 Mercury Release Inventory Toolkit guidance as a basis) will be undertaken for all ASGM project sites supported by the project, prior to the start Hg reduction interventions. ▪ Comprehensive mercury assessments will be updated for all ASGM project sites, upon pilot project completion.	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator, Int. ASGM Expert & Nat. POPs expert ▪ Project Coordinator, Int. ASGM Expert & Nat. POPs expert	▪ Copy of Hg baseline assessment. ▪ Copy of updated Hg assessment.	As the use of mercury in ASGM is illegal in Ecuador, most of the usage of mercury will take place outside the eyes and ears of the project. As such, estimates on real mercury usage versus disclosed/reported mercury usage should be carefully weighed by the project when undertaking mercury usage assessments.
	Indicator 2 35 kg/yr of mercury use/releases avoided from priority sectors (other than ASGM)	The reduction in the import/use of mercury containing medical devices and lamps (and their combined mercury content), that will be achieved with project support will be reported as the project's achievement. In addition, the total mercury content of 10	▪ Comprehensive national mercury baseline assessment (import/use) completed for medical devices and lighting products, prior to project interventions and updated upon project completion. ▪ Comprehensive baseline assessment conducted for 1 high-profile HCF and updated upon pilot project completion. ▪ Comprehensive baseline	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator & Nat. Hg in products expert ▪ Idem	▪ Copy of Hg baseline assessment. ▪ Copy of HCF Hg baseline assessment.	Very limited risks will hamper the collection of project objective data.

		tonnes of mercury containing wastes disposed of with project support, will be added to this achievement.	assessment conducted for the electricity sector pilot project and updated upon completion. ▪ Estimate of amount of Hg contained in ~ 10 tonnes of waste calculated using the UNEP Level 2 Mercury Release Inventory Toolkit. ▪ Official disposal certificate of the licensed facility that treated/disposed of the 10 tonnes of mercury containing waste products.		▪ Idem ▪ Idem ▪ Idem	▪ Copy of electricity sector pilot Hg baseline assessment. ▪ Copy of report prepared by Nat. Hg in products expert. ▪ Copy of official disposal certificate.	
	Indicator 3 Access to finance improved for ASGM sector through development/ improvement of 2 financial products.	The indicator includes the development/improvement of at least 1 financial ASGM product by a financial entity and the establishment of 1 competitive funds mechanism (CFM).	▪ Report prepared by the Nat/Int. Finance expert on the number of entities having benefitted from the new financial product and the combined accumulative value of ASGM loans allocated at the end of the project period. ▪ Report prepared by the Int. and Nat. ASGM experts on the amount of gold sold to legal buyers from ASGM entities/beneficiaries supported by the project. ▪ Report prepared by the Int. and Nat. ASGM experts on the number of ASGM operations benefitting from the project that make use of existing tax incentives.	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator & Nat. Finance Expert ▪ Project Coordinator, Int. and Nat. ASGM Experts. ▪ Project Coordinator, Int. and Nat. ASGM Experts.	▪ Proof of the existence of the new financial ASGM product. ▪ Copies of the applications of the entities having been allocated CFM grants. ▪ Copies of the final reports of the entities having received CFM grants. ▪ Copy of gold buyers' purchase records.	Obtaining records from legal gold buyers on how much gold they have purchased from ASGM operations supported by the project might be challenging. Obtaining information on the ASGM operations supported by the project making use of existing tax incentives might be challenging as they requires access to their tax records which the project is unlikely to obtain.
Component 4: Raise awareness, ensure project monitoring and disseminate project results and experiences.	***Indicator 1*** 11,778 people (3,533 females and 8,245 males) of whom awareness has been raised on the sound management of	Project beneficiaries who have become aware, are those that were targeted by the awareness campaign (9,600) and family members of people who were trained by the project	▪ Count people of whom awareness has been raised as a result of the awareness raising campaign, by using pre- and post- campaign interviews/questionnaires and extrapolation.	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator	▪ Training participation lists. ▪ Final Report of company engaged to	The most challenging data to collect will be that of people of whom awareness has been raised. It is suggested to agree on a methodology with the

	chemicals.	(2,118). See also Annex U.	▪ Count project beneficiaries that have received training, by using training participants lists.		▪ Project Coordinator	conduct Awareness Campaign.	company conducting the awareness campaign on how awareness levels before and after the campaign will be measures.
	Indicator 2 29 GEF UNDP M&E requirements met and adaptive management applied in response to needs and Mid-term Evaluation (MTE) findings.	See also detailed Project Results Framework (See Annex W). The 29 GEF UNDP M&E requirements include: ▪ 1 Inception Workshop Conducted and Report Issued. ▪ 5 PIRs completed and submitted. ▪ 1 Audit completed. ▪ 10 Project Board Meetings held and minutes recorded. ▪ 5 Monitoring and supervision missions conducted and BTOR prepared. ▪ 1 Mid-Term GEF Tracking Tool updated. ▪ 1 Gender Assessment completed as part of the MTE ▪ 1 Independent Mid-term Review (MTR) conducted (and translated into English) and management responses submitted. ▪ 1 GEF Secretariat learning/oversight missions/site visit conducted. ▪ 1 Terminal GEF Tracking	▪ Prepare, keep track of and count M&E related documents.	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator ▪ Nat. TT preparation consultant. ▪ Nat. Gender consultant. ▪ Int. consultants for the preparation of MTR and TE.	▪ Copy Inception Workshop Report. ▪ Copies of PIRs. ▪ Copy of audit ▪ Minutes of Project Board Meetings. ▪ BTORs for field visits (incl. GEF monitoring visit) ▪ Copy of Mid-Term Tracking Tool. ▪ Copy of Gender Assessment ▪ Copy of MTR ▪ Copy of terminal GEF Tracking Tool. ▪ Copy of TE report.	Very limited risks will hamper the collection of project objective data as they under the full control of the project coordinator.

		Tool updated. ▪ 1 Independent Terminal Evaluation conducted (and translated into English) and management responses submitted.					
	Indicator 3 28 Case study reports, publications, publications, presentations, (web-based) articles, etc. summarizing lessons-learned, best practices and experiences, disseminated at national, regional and global level.	See also detailed Project Results Framework (See Annex W). The 28 case study reports, publications, publications, presentations, (web-based) articles, include: ▪ 20 case study reports. ▪ 2 scientific articles. ▪ 5 project related news articles. ▪ 1 end-of-project report prepared.	▪ Prepare, keep track of and count case study reports, publications, publications, presentations and articles.	Annually Reported in DO tab of the GEF PIR	▪ Project Coordinator	▪ Copies of case study reports. ▪ Copies of scientific articles. ▪ Copies of published news articles. ▪ Copy of end-of-report.	Very limited risks will hamper the collection of project objective data as they under the full control of the project coordinator.
Mid-term GEF Tracking Tool (if FSP project only)	N/A	N/A	Standard GEF Tracking Tool available at www.thegef.org Baseline GEF Tracking Tool included in E.	After 2nd PIR submitted to GEF	*For example, national university; project consultant but not evaluator*	Completed GEF Tracking Tool	The collection of GEF TT data will be obtained in exactly the same manner as the data for Hg and POPs related indicators listed above.
Terminal GEF Tracking Tool	N/A	N/A	Standard GEF Tracking Tool available at www.thegef.org Baseline GEF Tracking Tool included in Annex E.	After final PIR submitted to GEF	*For example, national university; project consultant but not evaluator*	Completed GEF Tracking Tool	The collection of GEF TT data will be obtained in exactly the same manner as the data for Hg and POPs related indicators listed above.
Mid-term Review (if FSP project only)	N/A	N/A	To be outlined in MTR inception report	Submitted to GEF same year as 3rd PIR	*Independent evaluator*	Completed MTR	
Environmental and Social risks and management plans, as relevant.	N/A	N/A	Updated SESP and management plans	Annually	Project Manager UNDP CO	Updated SESP	

ANNEX C: EVALUATION PLAN

Evaluation Title	Planned start date Month/year	Planned end date Month/year	Included in the Country Office Evaluation Plan	Budget for consultants[39]	Other budget (i,e, travel, site visits etc…)	Budget for translation
Independent Mid-term Review (MTR)	April 2020	Sept 2020	Yes	*USD 38,000 (Int. consultant)*	-	*USD 5,500*
Terminal Evaluation	July 2022 *3 months before operation closure*	January 2023 *To be submitted to GEF within three months of operational closure*	Yes	*USD 52,000 (Int. Consultants)*	-	*USD 5,500*
			Total evaluation budget	101,000 USD		

[39] The budget will vary depending on the number of consultants required (for full size projects should be two consultants); the number of project sites to be visited; and other travel related costs. Average # total working days per consultant not including travel is between 22-25 working days.

ANNEX D: GEFSEC & STAP COMMENTS

Annex D - GEF SEC and STAP

ANNEX E: GEF TRACKING TOOL AT BASELINE

Annex E - GEF-6 Chemicals and

ANNEX F: TORS FOR PROJECT BOARD, PROJECT COORDINATOR, ADMINISTRATIVE-FINANCIAL ASSISTANT

Annex F - TORs for PB - PC and

ANNEX G: UNDP SOCIAL AND ENVIRONMENTAL AND SOCIAL SCREENING TEMPLATE (SESP)

Annex G - SESP signed.pdf

ANNEX H: UNDP PROJECT QUALITY ASSURANCE REPORT

Annex H - UNDP Project Quality Assu

ANNEX I: UNDP RISK LOG

Annex I - UNDP Risk Log.xlsx

ANNEX J & K: RESULTS OF THE CAPACITY ASSESSMENT OF THE PROJECT IMPLEMENTING PARTNER (MAE)

Annex J - Capacity Assessment of Proje

Annex K - MAE Final Risk Log.xlsx

ANNEX L: BASELINE ASSESSMENTS PERFORMED AT PPG PHASE

Available upon request: Annex L1 – POPs baseline; Annex L2 – ASGM Mercury Baseline; Annex L3 – Mercury in Products Baseline; Annex L4A - Laboratories Assessment Report; Annex L4B - Laboratories survey results; Annex L5A - Finance Mechanisms Strategy; Annex L5B - Summary of Financial Mechanisms; Annex L5C - Overview Mining loans; Annex L6 - Regulatory Framework Analysis; Annex L7 - Socio-Economic Analysis)

ANNEX M: CO-FINANCING LETTERS

Attached separately to the submission email.

Co-financing letters can also be accessed through the following Dropbox links:

Co-financing letters in Spanish: https://www.dropbox.com/sh/n1bgwx09gv8wzuv/AABlBFRA-uW-hNSZ4uDB59Fga?dl=0

Co-financing letters in English (those originally provided in English & unofficial English translations): https://www.dropbox.com/sh/qjibiz8m7ym94w5/AADJBNmpYgSXXP4svmHfSSLba?dl=0

ANNEX N: GEF OFP LETTER

Annex N - GEF OFP endorsement letter.

ANNEX O: GEF OFP LETTER

The latest version of the GEF PIF can de downloaded through the following link: https://www.thegef.org/sites/default/files/project_documents/08-26-15_PIF_request_document_revised.pdf

ANNEX P: LOA WITH THE GOVERNMENT

Annex P - LOA.pdf

ANNEX Q: DETAILED OVERVIEW OF DPC COSTS

Annex Q - Overview DPC

ANNEX R: LIST OF PEOPLE CONSULTED DURING PROJECT DEVELOPMENT

Annex R - List of people

ANNEX S: GENDER ANALYSIS AND STRATEGY

Annex S - Gender Analysis and

ANNEX T: KNOWLEDGE MANAGEMENT STRATEGY

Annex T - Knowledge

ANNEX U: ESTIMATE OF THE NUMBER OF PROJECT BENEFICIARIES

Annex U - Estimate of the number of

ANNEX V: DETAILED PROJECT RESULTS FRAMEWORK

Annex V - Project Results Framework