PROJECT IDENTIFICATION FORM (PIF) [1]

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:GEF Trust Fund

PART I: PROJECT IDENTIFICATION

Project Title:	Sound Management of POPs Containing Waste in Mexico		
Country(ies):	Mexico	GEF Project ID:[2]	5179
GEF Agency(ies):	UNDP (select) (select)	GEF Agency Project ID:	4686
Other Executing Partner(s):	Ministry of Environment and Natural Resources (Secretaría de Medio Ambiente y Recursos Naturales, SEMARNAT)	Submission Date:	28 March 2013
GEF Focal Area (s):	Persistent Organic Pollutants	Project Duration (Months)	60
Name of parent program (if applicable): ➢ For SFM/REDD+ ☐		Agency Fee ($):	543400

A. FOCAL AREA STRATEGY FRAMEWORK[3]:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount ($)	Indicative Co-financing ($)
(select) CHEM-1	Outcome 1.3: POPs releases to the environment reduced.	Indicator 1.3 Amount of unintentionally produced POPs releases avoided or reduced from industrial and nonindustrial sectors; measured in grams TEQ against baseline as recorded through the POPs tracking tool.	GEFTF	3150000	13450000
(select) CHEM-1	Outcome 1.4 POPs waste prevented, managed, and disposed of, and POPs contaminated sites managed in an environmentally sound manner.	Indicator 1.4.2 Amount of obsolete pesticides, including POPs, disposed of in an environmentally sound manner; measured in tons.	GEFTF	1550000	5000000
(select) CHEM-1	Outcome 1.5 Country capacity built to effectively phase out and reduce releases of POPs	Indicator 1.5.2 Progress in developing and implementing a legislative and regulatory framework for environmentally sound management of POPs, and for the sound management of chemicals in general, as recorded in the POPs tracking tool.	GEFTF	550000	2550000
(select) CHEM-3	Outcome 2: Contribute to the overall objective of the SAICM of achieving the sound management of chemicals throughout	Indicator 3.2.1 Countries implement SAICM relevant activities that generate global environmental benefits and report	GEFTF	200000	800000

[1] It is very important to consult the PIF preparation guidelines when completing this template.
[2] Project ID number will be assigned by GEFSEC.
[3] Refer to the reference attached on the Focal Area Results Framework when filling up the table in item A.

	their life-cycle in ways that lead to the minimization of significant adverse effects on human health and the environment	to the International Conference on Chemicals Management			
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)	Others		(select)		
		Sub-Total		5450000	21800000
		Project Management Cost[4]	(select)	**270000**	1,200,000
		Total Project Cost		5720000	23,000,000

B. PROJECT FRAMEWORK

Project Objective: To minimize impacts on health and the global environment though sound chemicals management and reduction of POPs releases and exposure to POPs from e-waste and pesticides management operations in Mexico.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount ($)	Indicative Cofinancing ($)
1.Strengthening Institutional and public policies and capacities regarding POPs and sound chemicals management	TA	A) National legal and regulatory framework strengthened to enhance enforcement and compliance capacity for Stockholm Convention (SC) obligations within the countries overall sound chemicals management framework , in particular potential POPs release from e-waste management and pesticides ..	A1) Legal review, gap analysis and economic instruments reviewed in the context of the national sound chemicals management policies and activities for potential POPs release from e-waste management and pesticides. A2) Regulatory amendments prepared, including enabling of relevant economic instruments applicable to sound chemicals management for potential POPs release from e-waste management and pesticides A3) Training on inspection for new POPs substances and products containing new POPs at state level conducted for potential POPs release from e-waste management and pesticides. A4) Analytical and monitoring capacities and protocols at Customs and chemicals labs enhanced for potential POPs release from e-waste management and pesticides. A5) Sustainable capacity to support SC reporting and	GEFTF	200000	800,000

[4] GEF will finance management cost that is solely linked to GEF financing of the project. PMC should be charged proportionately to focal areas based on focal area project grant amount.

			information exchange obligations in place for potential POPs release from e-waste management and pesticides			
2. Reduction of POPs releases from e-waste processing at State and waste processors levels.	TA	B) Development and implementation of State Pilot level e-waste management plans, specifically related to POPs contained in e-waste, in three States: Nuevo Leon, Jalisco and Federal District of Mexico City and projection to entire country.	B1) Proposal of legal amendments amendments for potential POPs release from e-waste management and pesticides. B2) Documented assessment of economic instruments and recommendations on fostering the sustainable financing of sound management of e-waste prepared, including development of WEEE stewardship levies, supported by full lifecycle accounting and cost studies. B3) State and national level inventories of e-waste generation, associated mass flow balances and analytical estimates of POPs content and potential unintentional releases developed. B4) Three (3) state level Pilot management plans developed, for states of Nuevo Leon, Jalisco and Federal District of Mexico City, developed, implemented and evaluated. B5) Outreach strategy designed and implemented including a communication and awareness program for general public and state level governments and intended to overcome barriers to recycling of e-waste rather than stockpiling, randomly disposing of them or directing them to unsound processing. B6) E-waste training delivered and best practice sound management guidelines for municipalities and recycling enterprises as well as states governments developed and tested. B7) Nationwide	GEFTF	3250000	13650000

			characterization of recycling industry documented and registration system implemented B8) Nationwide e-waste exchange linking waste streams and processors established			
		C) Demonstration of those POPs related to e waste release minimization in formal recycling and informal recycling of e-waste settings.	C1)Demonstration pilots of implementation of improvements BAT/BEP in at least two formal recycling facilities developed with emphasis on separating BFRs from e-waste streams. C2) Demonstration pilots of implementation of improvements BAT/BEP in at least two informal recycling facilities developed with emphasis on separating BFRs from e-waste streams. C3) Demonstration pilots in two non-formal recycling facilities developed with emphasis on environmentally sound processing implemented/. C4)) Feasibility study and design of pilot center for precious metals extraction undertaken.			
3.Reducing risks through elimination of POPs pesticides stockpiles and wastes	TA	D) Provincial POPs pesticides Waste Management Plan establishment and tested in selected provinces	D1 Updated detailed inventory of remaining POPs pesticide stockpiles and associated waste and analytical estimates of POPs prepared D2) Inventory verified and complemented,, initial prioritization screening, and risk assessment of POPs pesticide contaminated sites produced including training on site assessment for relevant government officials and service providers. D3) Waste Management plan from identification through to destruction for pesticides designed and tested at state pilot scale E1) Qualification of cost effective commercial	GEFTF	1,500,000	5,000,000

		E) Substantial elimination of remaining POPs pesticide stockpiles and wastes in Mexico F) Containment/remediation of priority POPs pesticide contaminated sites and national program to address remaining sites.	options for the environmentally sound destruction of POPs pesticide stockpiles and wastes consistent with international standards E2) Environmentally sound destruction of at least 400 t and up to 1,000 t of POPs pesticide stockpiles and waste completed. E3) Technology of recycling processes for pesticide used containers assessed F1) Detailed remediation plans on up to 3 priority POPs pesticide contaminated sites developed. F2) First phase remediation plans for up to 10 POPs pesticide contaminated sites developed. F3) National program for ongoing management of POPs pesticide contaminated sites developed and adopted.			
4. Obsolete pesticide management capacity strengthening	TA	G) Institutional strengthening at provincial level for obsolete pesticides management delivered	G1)Assessment of national institutional capacities for establishment of obsolete pesticide management plans undertaken G2) Outreach and training programme on obsolete pesticide management for pesticide end-users, waste management service providers, and law enforcement government officers G3) National pesticide waste management guidelines updated. G4) Province and district level obsolete pesticide and used containers collection programme reinforcement delivered. G5) National replication program for sustainable obsolete pesticide management developed.	GEFTF	350,000	1,750,000
5.Monitoring and Evaluation	TA	H). Monitoring, learning, adaptive feedback, outreach, and evaluation	H1) M&E and adaptive management applied to project in response to needs, mid-term evaluation	GEFTF	150,000	600,000

			findings with lessons learned extracted. H2) Lessons learned and best practices are disseminated at national level.			
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Sub-Total					5,450,000	21,800,000
Project Management Cost[5]				GEFTF	270000	1,200,000
Total Project Costs					5,720,000	23,000,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, ($)

Sources of Cofinancing	Name of Cofinancier	Type of Cofinancing	Amount ($)
National Government	Ministry of Environment and Natural Resources (SEMARNAT)	In-kind	1,700,000
National Government	Ministry of Agriculture (SAGARPA)	Grant	7,550,000
Private Sector	AMIFAC (Asociación Mexicana de la Industria Fitosanitaria A.C.)	Grant	2,500,000
Local Government	States of Nuevo León, Mexico City (Federal District) and Jalisco	In-kind	1,750,000
Bilateral Aid Agency (ies)	Nadbank (North American Development Bank)	Grant	3,000,000
Private Sector	OEMs, importers and major distributors of electronics	In-kind	3,000,000
Private Sector	e-waste processors	Grant	3000000
Foundation	SAICM	Grant	145000
Private Sector	GTZ and, SWISS Bi-lateral support of WEEE initiatives	Grant	300000
GEF Agency	UNDP	In-kind	55000
Total Cofinancing			23,000,000

D. GEF/LDCF/SCCF/NPIF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY[1]

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (a)	Agency Fee (b)[2]	Total c=a+b
UNDP	GEFTF	Persistent Organic Pollutants	Mexico	5720000	543400	6263400
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select) (select)	(select)				0
(select)	(select) (select)	(select)				0
(select)	(select) (select)	(select)				0
(select)	(select)	(select)				0

[5] Same as footnote #3.

	(select)					
(select)	(select) (select)	(select)				0
(select)	(select) (select)	(select)				0
Total Grant Resources				5720000	543400	6263400

[1] In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table

[2] Please indicate fees related to this project.

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1 the GEF focal area/LDCF/SCCF strategies /NPIF Initiative:

The proposed project and its activities are consistent with the GEF-5 Chemicals Results Framework's main goal "*to promote the sound management of chemicals throughout their life-cycle in ways that lead to the minimizations of significant adverse effects on human health and the global environment.*" In particular, the proposed project will contribute to the Objectives 1 and 4 through the following interventions:

Relevant GEF-5 Strategy Indicator	**Project's contribution**	**GEF**	**Co-finance**
Chem 1 Objective "Phase Out POPs and Reduce POPs releases"			
Outcome 1.3: POPs releases to the environmentreduced. ı I**ndicator 1.3.1** Amount of un-intentionally produced POPs releases avoided or reduced from industrial and nonindustrial sectors; measured in grams TEQ against baseline as recorded through the POPs tracking tool	**Project Component 2:** "POPs release reduction from e-waste processing" will develop state level e-waste management plans in 3 States: Nuevo León, Jalisco and Federal District of Mexico City. The project will reduce the emissions of PCDD/F by about 25 g TEQ per year (which are 33 % of estimated emissions from e-waste), and would lead to reduced releases of PBDEs through improved management practices, namely elimination of open burning of plactic residues poorly controlled, noting they are not currently classified as an unintentional POPs relase.	**3,850,000**	**16,650,000**
Outcome 1.4 POPs waste prevented, managed, and disposed of, and POPs contaminated sites managed in an environmentally sound manner. Indicator 1.4.2 Amount of obsolete pesticides,including POPs, disposed of in an environmentally sound manner; measured in tons.	**Project Component 3**: "Reducing Risks from POPs Pesticides stockpiles and Wastes" will lead the establishment of a National POPs Pesticides Management Plan that will be tested in selected provinces. The project will provide for the environmentally sound destruction of 1200 tons of obsolete pesticides of which at least 400 tons are POPs pesticides. POPs pesticide contaminated sites will be addressed through establishment of prioritized inventory inclusive of site and risk assessments and undertaking pilot containment/remediation of selected priority sites. It will also support institutional and technical capacity strengthening on the safe use of pesticides and associated management of pesticide wastes through avoidance of waste generation at the district / end user level..	**1,850,000**	**6,750,000**
CHEM-3 Pilot sound Chemicals management and mercury reduction			

Outcome 3.2 Contribute to the overall objective of the SAICM of achieving the sound management of chemicals throughout their life-cycle in ways that lead to the minimization of significant adverse effects on human health and the Environment Indicator 3.2.1 Countries implement SAICM relevant activities that generate global environmental benefits and report to the International Conference on Chemicals Management.	Project Component 1: "Strengthening Institutional and public policies and capacities regarding POPs and sound chemicals management" serves to strengthen, refine and integrate the national regulatory and institutional system covering enforcement of and compliance with the country's obligations under the Stockholm Convention within the broader policy framework governing sound chemicals management and associated international chemicals conventions and associated initiatives. The Component will enhance current SAICM initiatives specifically in relation to ensuring POPs issues are addressed within the SCM framework and lessons learned from Stockholm Convention and GEF work on POPs are transferred to other SCM initiatives including this being undertaken to address mercury releases.	200,000	800,000

A.1.2. For projects funded from LDCF/SCCF: the LDCF/SCCF eligibility criteria and priorities:

A.1.3 For projects funded from NPIF, relevant eligibility criteria and priorities of the Fund:

A.2. national strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

The first submission of Mexico's National Implementation Plan of Stockholm Convention (NIP) transmitted in 2008 establishes the need to implement action plans for management of POPs pesticides, PCBs and unintentional POPs (UPOPS) release. In the NIP action plan for elimination of release to environment of POPs pesticides, obsolete stocks are particularly emphasized in order to prevent or minimize risks. Goals are the amount of pesticides eliminated, decrease in the contents of selected food stuff and on diverse matrices and media, and the reduction of the number of contaminated sites to reduce risks. Secondly, reduction or elimination of UPOPs from anthropogenic sources is included with the objective of total elimination. The goals are decrease of releases from industrial sources, incineration plants, cement plants, and dump sites burning (which in this case would correspond to the likely burning of e-waste); also includes detailed inventory development/maintenance and a national information (communication) system creation.

The endorsed NIP form the basis for inclusion of, POPs elimination as part of the Mexican government National Development Plan 2007-2012 and also is part of the Sectoral Environment and Natural Resources Plan 2007-2012 of the Ministry of Environment and Natural Resources, SEMARNAT. Within this ministry, safe management and elimination of POPs is part of the National Program for Prevention and Integral Waste Management (2008-2012), particularly regarding implementation of NIP action plans for pesticides, development and maintainenance of updated POPs inventories, analytical capacities and

integration of POPs into the broader national sound chemicals management framework being developed through the SAICM initiative. In the NIP, it was established that inventories still need to be complemented, to be more precise, and to identify locations, as well as a need is expressed that contaminated sites inventory requires more systematic work and a strategy required for their management. POPs release from e-waste management was not considered at the time NIP was developed, but it will most likely be inserted into the updating of NIP later this year, considering new POPs listing. This will also become a part of the new governement National development Plan 2013-2018.

POPs elimination forms part as well of the NAFTA environmental agreement activities, and therefore as national policies, for over 10 years and is in countinuos progress. It is one of the aims of the Parallel agreement to environmentally harmonize practices and standards within the three NAFTA countries. North American Regional Actions Plans (NARAP) by NAFTA included work on PCBs, DDT, Lindane and Chlordane which encompassed actions to be developed in Mexico. Among others, analytical capacities strengthening, information systems and sound management. The proposed activities in this proposal are aligned with those.

B. PROJECT OVERVIEW:

B.1. Describe the baseline project and the problem that it seeks to address:

Baseline situation

E-Waste

1. Electronics manufacturing industry in México has grown substantially in the last few years. The electronics industry is the largest export sector in the country generating US$44.8 billion and employing over 307,000 people in over 600 electronic goods manufacturing companies in 2005. The electronics industry in México manufactures and assembles a diverse range of products, including consumer products in high demand globally such as audio, video, computing, telecommunications, commercial and office equipment. Mexico is also an important parts and components manufacturer for diverse industries. For some of Mexican cities, such as Tijuana, Ciudad Juarez and Guadalajara, electronics constitute the main manufacturing activity. The Baja California cluster (Tijuana-Mexicali) produces mainly TV for export to the U.S. (approximately 30 million TVs annually) with the majority of production in Tijuana (65%) and Mexicali (21%).

2. Estimated domestic e-waste generation have been estimated by the National Institute of Ecology (INE) for five products (televisions, computers, audio equipment, telephones and mobile telephones) in México in the last years using 2006 as a baseline. The e-waste generation estimated that between 150,000 and 250,000 tons of e-scrap was generated in Mexico in 2006. This value is estimated to have increased to 360.000 ton s in 2010 (Instituto Nacional de Ecología, 2010). The amount of e-waste distribution in the 5 items is: TV sets (52% of total), desk and portable computers (39%), audio equipment (8%) and mobile telephones (1%). Other equipment (video, games, diaries, etc) amount at least to an additional 20%. More generally, the average composition of materials found in e-waste , according to the Swiss Federal Laboratories for Materials Testing and Research for industry[6] is the following: metals (60.2%), plastics (15.2%), metal/plastic mixtures (5.0%),

[6] Widmer R., Oswald-Krapf H., Sinha-Khetriwal D., Schnellmann M., Böni H. (2005) Global Perspectives on e-waste. Environmental Impact Assessment Review 25: 436-458.

cables (2.0%), screens (CRT/LCD: 11.9%), printed circuit boards (1.7%), other pollutants (2.7%) and others (1.4%). For the purpose of calculating estimated UPOPs releases, the burning of cables and metal-plastic mixtures (for metal recuperation), circuit boards (recuperation of precious metals) and plastic waste fractions (for waste reduction) would primarily be considered.

3. Import of e-waste for recycling to México is not known. However, sharing an over 2.000 km border with USA conveys to imply that e scrap is likely to be imported into México. A conservative estimate is that in the border cities of Tijuana, and Juarez, could be 5% of the amount generated in México, that would make a total 380.000 metric tons as baeline estimate of current national e-waste generation.

4. Furthermore, by knowing that 90 percent of e-waste are TV sets and computers containing PBDEs of the order of 18.000 mg/kg, the mass flow of PBDEs contained in e-waste in Mexico between 125-570 tons. By starting with this high mass flow baseline, considerable amounts of PBDE/Fs releases may occur from e-waste processing given the prevailance of burning of these plastic components..

5. Out of this amount, there are no clear data as to how much is processed or recycled in an environmentally sound manner. There are about 50 recyclers identified and registered, located mainly in the three States of Nuevo León, Jalisco and Mexico City área plus another number which operate mostly under informal patterns. Estimations are that most of them only pre-process the "rich" (in precious metals) fraction of the waste since most of them are focussed on computer waste and specifically printed circuit boards which are to be finally recovered in other countries, and leaving the rest as waste. Recyclers operate, in the best of cases, under a permit by Environmental Impact Assessment when they open their facilities. Additionally, there are no formal chains for the colletion and logistics for them, all of it being informal and some collected as urban waste. In summary, there is no integrated environmentally sound management system operating for that complete life cycle of this waste stream but this could be fostered based on market mechanisms ans facilitated by state governments.

6. Overall it is estimated that Mexico generated and disposed of ~360,000 tonnes of e-waste in 2010, plus the 5% of import and assuming that 50 % of the cables and metal/plastic mixtures are burned in an uncontrolled manner for thermal wire reclamation, that would lead to: 380,000 *0.035 (2% weight fraction cables plus 5% metal/plastic mixtures)*5,000 μg TEQ/t = 67 g-TEQ/yr in PCDD/F emissions (emission factor for open burning of cables: 5,000 μg TEQ/t, UPOPs Toolkit Cat. 2, Class m), while the uncontrolled burning of circuit boards could be responsible for: 360,000t*0.017 (1.7 % weight fraction circuit boards)*930 μg TEQ/t = 6g-TEQ/yr in PCDD/F (emission factor for open burning of mixed e-waste: 930 μg TEQ/t, Hedlund et al. 2005).

7. Unfortunately, no emission factors are readily available for the burning of e-waste metal-plastic mixtures or plastic waste fractions, even though these make up a considerable percentage of e-waste fractions (5 and 15.2 % respectively) and could be responsible for significant releases of POPs). An attempt will be made to calculate emissions from these two waste fractions during the PPG phase.

8. As such total uncontrolled PCDD/Fs emissions from e-waste processing of cables and circuit boards alone would total ~ 73g I-TEQ/yr. A more precise quantity will be determined during the PPG phase. As a reference, during the NIP, estimations were made for 2004 of PCDD/F emissions in an interval between 238 and 3039 g-TEQ/yr, with an average of 712 units. In the NIP it was mentioned that more data and tools are required to

improve determinations

9. Chemicals found in laptop computers of the main popular brands, included four specific brominated flame retardants or BFRs (Greenpeace, 2005) including pentabromodiphenyl ether. Similarly, bromine, indicative of brominated flame retardants according to Greenpeace, was present in a wide range of different materials and components, particularly for circuit boards. Over 40% of the 523 samples tested in total contained bromine (above a detection limit of 0.1%), at concentrations ranging from 0.3% to 10% by weight . By further considering that these computers are to be disposed of in this year (in a study by the National Institute of Eecology, INE, 2009) the amount of potential PBDEs that may be released is considerable, adding up to "older" e-waste that is still stored in Mexican homes, which more likely will also contain PBDEs.

10. In summary for PBDEs, the massflow of PBDEs contained in E-waste in Mexico is ~ 125 570 tons/year. PBDE/F can be released if this material is burnt as a waste reduction measure and potentially during the recycling or energy recovery processes that may be applied. The releases need to be verified, there is, however, PDBE/F is likely released from present e-waste management practices in Mexico. It should further be noted with concern that PBDEs are present in Mexican population at a very high concentration. Values up to 43 ng PBDEs /g lipid have been measured in Mexican children which is more than 10 times levels found in low exposure countries (Pérez-Maldonado et al, 2009)[7].

11. The Mexican government has a high interest on e-waste sound management and is presently developing "Waste Management Plans", which are instruments that promote legal requirements for environmentally sound management. The Mexican government is also interested in waste management practices of electronics producing plants. Therefore, regulated and supervised recycling chains are required as well as those plans as an important part of the solution incorporating as well the Original Equipment Manufacturers (OEMs) in those.

12. Legislation on e-waste management: There are no specific regulations in México that require manufacturers to ensure sound management of chemicals in electronic goods. The National Law for Prevention and Integral Management of Waste (LGPGIR) is still in the process of implementation and enforcement. Two barriers for implementation are, first that the Law establishes "shared responsibility" for hazardous waste management (instead of extended responsibility, as in other countries) and secondly that the law classifies e-waste as a "special management" waste (and not as hazardous waste). In case of "special handling" waste a Management Plan must be developed and volumes of waste reported to state governments for enforcement of the regulation. Only eight out of the thirty two states, have state laws governing special handling waste, including electronics.

13. The LGPGIR also establishes that SEMARNAT may promote and prescribe covenants with private sector companies to develop Management Plans to "provide incentives for waste minimization or valorization" and that SEMARNAT promote "purchasing of commercial products that contain recyclable or returnable materials".

14. A Standard NOM-133-SEMARNAT which regulates PCBs (polychlorinated bi-phenyls) management and elimination, may also impact on e-waste management, considering that some capacitors in electronic goods may still contain PCBs. Standard

[7] Exposure assessment of polybrominated diphenyl ethers (PBDEs) in Mexican children, Chemosphere 75 (2009) 1215–1220

NOM-052-SEMARNAT identifies four wastes from electronic components manufacturing (lead solder waste, waste solvents from cleaning of electronic circuits, wastes in pigment manufacture for magnetic tapes and waste from the production of cathode ray tubes) which may be "subject to particular management conditions". These conditions are similar to a Waste Management Plan but are only to be registered with SEMARNAT. This could also be a driver for sound management of chemicals during the production and manufacture of electronic goods in México. No legislation similar to that covering WEEE or RoHS is in place in Mexico at this time.

15. Although e-waste was not included as such in the NIP action plans, because UPOPs emissions from E-waste processing were not calculated and as PBDEs were not in Stockholm Convention at that time, safe e-waste management is becoming a high priority in the country. The main drivers for increased attention for E-waste management are i) the growing volumes ii) increased environmental monitoring data iii) international trends among key trade partners, like RoHS in the European Union, as electronics is a very large production sector in Mexico iv) Mexico's location relative to high e-waste exporting markets.

Pesticides

16. Pesticides: 50.000 Tons per year of commercial pesticides are produced in Mexico by the large companies affiliated to AMIFAC (Mexican Association of Phytosanitary Industry) and another additional 30% is produced by the small and medium producer, UMFFAC (Mexican Union of formulators and manufacturers of pesticides) totalling the production at 65.000 Ton per year. 70% of the produced pesticides is used in 6 States or groups of states. These are, in decreasing intensity : Sinaloa, Chiapas, Veracruz, Jalisco-Nayarit-Colima, Sonora-Baja California, Tamaulipas

17. Formerly the Mexican government was owner of enterprises that formulated and distributed pesticides including POPs pesticides. The formulating enterprises and facilities were privatized in some cases or abandoned. Some of the POPs pesticides stocked remained stored for long periods of time and the sites started to be used for alternate purposes. Other government entities, both federal and state, sold pesticides at subsidized prices to farmers and stored large quantities of pesticides for that purpose but were finally shut down or bankrupted when the scheme ended. Additional obsolete POPs and other pesticides are stored at shut down farmer's cooperatives and within the active farming community.

18. Official inventory of obsolete pesticides as of 2010 is 290 metric tons. However the real number based on joint estimations of government and the association of pesticide producers is at least 1.200 Ton, out of which about one third, 400 Ton are DDT and HCH In addition a significant part of the rest may be COPs combined with non POPs pesticides. Considering the amount of pesticides produced in the country is 65.000 Ton per year, if we considered that only 1 percent of that amount remained unapplied, then we would have about 650 Ton of obsolete stock per year

19. While not all sites that may have obsolete pesticides stocks are inventoried the following entities are known major holders of pesticides, which may contain POPs:

- Facilities part of or related to the Government Agriculture Development Bank,

BANRURAL (that distributed 40% of pesticides in México in 1990) or its subsidiary, Servicios Ejidales.
- Warehouses of Ministry of Health, for public health campaigns/uses.
- Customs storage areas
- Facilities of pesticide formulators that do not operate anymore
- Warehouses in rural production Companies.
- Warehouses of distributors and fumigation companies
- Warehouses of common property lands (ejidos) particularly in geographic areas that produced cotton, sugar cane or bananas.
- Warehouses where the Government Tobacco company, Tabamex, operated
- Warehouses of Givernmental Mexican Institute of Coffee (Inmecafe) or the council to support fruit production (Conafrut) operated.
- Ministry of Agriculture (presently SAGARPA) through its function to supply resources for irrigation districts, Temporal districts, arid zones and plant sanitary extension service
- National Institute of Agriculture Research (INIA)

20. Due to the existence of the large obsolete pesticide stockpiles including POPs pesticides, a significant risk of POPs pesticide release and exposure in Mexico as well as release to the global environmental exists. Recent studies published in technical literature report that the POPs organochlorine pesticides concentrations have been found in the air in the state of Chiapas, Mexico, These are elevated compared with those of the Great lakes in USA, (in pg m3): Chlordane (201), toxaphene (505), dieldrin (15), HCH (25) , besides DDT and DDE. (Alegria, 2005); chlordane and hexachlorobenzene in coastal lagoon sediments and in fish in Yucatan (Gold, 2005) and Lindane (10), Mirex (90), HCH (50) ng/g lip during environmental monitoring studies in fish in Veracruz (Mejía-INE, 2007).

21. Legislation for Pesticides and POPs: The General Law for Prevention and Integral Management of Waste (2003) (Ley General para la Prevención y Gestión Integral de Residuos. LGPGIR) establishes management and control of waste to minimize generation and maximize recovery in a framework of shared responsibility and integral management. The Law further forbids landfilling and dilution of POPs containing materials. On the other hand, the General Law for Health (2006) regulates sanitary control for import, processing and use of pesticides, fertilizers and toxic substances in them, the facilities in which they are managed and sanitary conditions of water and solid waste. The General Law for Sustainable of Agriculture (2001) regulates agriculture activities to be environmentally sound, economically viable and socially accepted. The Law also controls food purity and contaminant residues

22. Since 1991 Mexico has forbidden import, manufacture and selling of Aldrin, chlordane Dieldrin, Endrin and Mirex; heptachlorwhile HCB and toxafene have not been registered yet. DDT and Lindane were restricted to be used only by Health ministry the former and as pesticide the latter since 1991.

23. The elimination of stockpiles of POPs pesticides and other obsolete pesticides through a planned concerted national action is a top priority for SEMARNAT, and the Government of Mexico for the following reasons:

- The national pesticide producers used to be nationally owned enterprises. These have been recently privatized and the Government has contractual and moral obligations for past contamination. As prevention is less costly than later remediation. The

Government is prepared to devote substantial co-funding funds to implement action.

- Companies that took over government owned pesticide plants have records from due diligence procedures that would be helpful in the determination of contamination and obsolete inventories. Those records will be outdated if not acted upon quickly.
- Mexico has a substantial agricultural export to the USA and needs for this export to comply with USDA requirements. It is in the country's interest to have a nation-wide compliance plan rather than scatters and individual compliance procedures.
- Much POPs and Obsolete pesticides are stored under unsafe conditions with high risk for human health and the environment both locally and globally. For getting the situation under control a consolidated review of policies, enforcement, available or desired disposal methods, actual contamination, remaining obsolete inventories and a consolidated remedial action plan is needed
- NAFTA´s NARAP indicated that actions were required for enhancing analytical capacities, capacity building, inventories development as well as outreach strategy implementation for Lindane and Chlordane (this only can be used for wood protection) as well as elimination of DDTs obsolete stocks.

24. While the two POPs related waste streams, e-waste and obsolete pesticides, may at the outset seem different,there are a number of synergies between the two types of waste can be realized within a common GEF project framework in the following areas:

- Simultaneous work with the involved states in management of POPs, pesticides and e-waste.
- Establishment and operation of (as officially defined) management plans for the two wastes within a national framework of such management plans for special wastes (The management plan implemented for PCBs using GEF assistance is a medel for this)
- Applicability of common economic and strewardship concepts (i.e. extended producer responsibility)
- Coordination between federal and state authorities with respect to regulatory controls and enforcement of sound management including the role of the federal attorney's office for environment protection, PROFEPA
- Common issues related import/export need to be addressed

25. Primary End Of Life challenges for electric and electronic equipment in Mexico (in particular for the management of substances of concern) are:

- Lack of regulatory framework and widely adopted standards in México affecting the environmentally sound management and law enforcement, of such materials to prevent improper management of those substances.
- Lack of dialogue between government and stake holders such as OEMs, importers, recyclers, and entities involved in WEEE collection.
- Lack of know-how and technology among existing SMEs that treat e-waste (formal and informal) in an environmental sound manner to avoid releases of POPs and other harmful substances.
- Lack of management tools needed to organize safe WEEE management at State level including: effective economic instruments and EPR mechanisms; appropriateness of local regulations, coordination of activities with federal government, States inventories, and infrastructure for management, development of State – level WEEE managment plans and their public validation.
- Capacity and organization of enforcement within and between Federal and State authorities.
- Collection chain from public households still to be developed

26. For POPs and other Obsolete Pesticides the main challenges are::
    - Need for more detailed identification and evaluation of obsolete pesticide stockpiles recognizing that experience generally reflects these are larger than initially estimated
    - OP Contaminated sites not fully identified nor properly characterized in terms of extent and risk
    - Wide geographical distribution and scale of obsolete pesticide stockpiles wastes and contaminated sites (i.e. many sources and users throughout the country ranging from bulk generation to small container level sources)
    - Absence of clear domestic OP disposal options
    - Need to manage and reduce ongoing OP generation and absence of EPR system to support this as in other NAFTA countries.

Project Strategy and Design

The above country context and identification of current barriers frames a strategy for addressing POPs and more generally chemicals management that this project adopts in its project objective and overall structure summarized in the Project Framework above.

Mexico recognizes its status as a rapidly industrializing country that is approaching a position of assuming full sovereign responsibility for this issue and is adopting a strategy of using this project to leverage national resources to so position itself. GEF assistance will be critical in achieving this rapidly over the next several years. It also sees this as a key opportunity to ensure that the country has the institutional, regulatory and technical tools available to manage on-going POPs issues into the future, consistent with developed country practices. This is underlined through its membership in NAFTA and needs to have harmonized standards and practices with Canada and the United States.

The following elaborates on the project structure and its six component design by outcome and indicative activities:

Component 1: Strengthening Institutional and Public policies and capacities regarding POPs and sound chemicals management

27. This component will focus on strengthening regulations, public policies and institutional capacities that facilitate diminishing POPs relase risk in general and in particular associated with obsolete pesticides and e-waste. This will have a particular emphasis on enforcement and reinforcing Mexico's fulfillment of Stockholm Convention reporting obligations. All of this will include integration of these POPs related initiatives within the overall national framework for sound chemicals management and SAICM initiatives. As stated above Mexico already has Laws to regulate management of POPs containing materials and some government and private programs on pesticides. However, still more integration is requiered in the following:
    - compliance of regulations, in particular related to the destruction/management of pesticide obsolete stocks;
    - a sustainable and permanent system of inventory tracking of these POPs containing stocks including not only contaminated sites, but also two of the newly included POPs such as Lindane and PBDEs

Outcome A: National legal and regulatory framework strengthened to enhance enforcement and compliance capacity for Stockholm Convention (SC) obligations within the countries overall sound chemicals management framework.

28. The following outputs will be included in under this outcome:

A1) Legal review, gap analysis and economic instruments reviewed in the context of the national sound chemicals management policies and activities. This will include a review of POPs related regulations and their integration within an overal SCM framework. It will also facilitate better coordination between authorities, at federal and state level, for the management of pesticides and of e-waste in particular, since the latter are in their jurisdiction, and of all POPs in general. Also available economic instruments and potential new ones will be assessed, particularly where general principles of extended producer responsbility and stewardship applicable to chemicals generally can be applied.

A2) Regulatory amendments prepared, including enabling of relevant economic instruments applicable to sound chemicals management. Based on the above, regulatory amendments, legal amendments in the Mexican Law for Hazardous Waste and its Regulation as to align with Basel Convention Classification and economic instruments to help facilitate compliance will be adopted.

A3) Training on inspection for new POPs substances and products containing new POPs at state level conducted: Compliance with regualtory requirements for the sound management of chemicals including POPs will be strengthened through training of federal (PROFEPA and Customs officers) and state inspectors based on a train the trainers model.
A4) Analytical and monitoring capacities and protocols of federal inspectors and Customs and chemical labs enhanced.

A5) Sustainable capacity to support SC reporting and information exchange obligations in place: with particular emphasis on participating with the Global POPs Monitoring Network and taking a leadership role in its regional network

Component 2: Reduction of POPs releases from e-waste processing at State and waste processor levels

29. This project component will demonstrate best practices for e-waste management at State level in order to minimize POPs releases from this waste stream. The demonstration will showcase both the public sector responsibilities as well as public-private sector interaction and finally ensure that good practices are adopted among a final e-waste processing companies for state and interstate level replication. Activities are:

Outcome B) Development of State level e-waste management plan in States of Nuevo Leon, Jalisco and Federal District of Mexico City

The activities to be carried out in this outcome are:
B1) Develop a proposal of legal amendments at State level for sound e-waste management and develop model state e-waste management plans.
B2) Assess economic instruments and prepare a proposal in order to foster the sustainable financing of sound management of e-waste, including development of WEEE stewardship levies and EPR mechanisms, supported by full lifecycle accounting and cost studies.
B3) Develop a State and national level inventories of e-waste generation and Mass flow balance. A better determination of the amount of waste generated will be obtained and a more precise quantification of e-waste that can be captured for environmentally sound management. This will be supported by analytical estimates of POPs content and potential unintentional releases utilizing factors from the technical literature and in the case of PCCD/F current UNEP Tool kit guidance for this source category, as well as chemical

analysis of samples
B4) Management Plans developed for e-waste in state levels. Pilot demonstration projects based on plans above will be developed, implemented and evaluated in three States, one in North bordering with the United States, Jalisco and Federal District (México City). These plans will encompass the complete life cycle from identification of e-waste sources through to end of life. And will incorporate supervision by third parties
B5) Design and establish an outreach strategy that includes public awareness/ motivation for supporting capture of e-waste at source, and a cost effective collection chain. This would involve development and implementation of an outreach and communication program for general public and state level governments. This activity has the objective of increasing public awareness perception/motivation through breaking psychological and sociological barriers in people to present their "obsolete" electronic goods for recycling rather than stockpiling, randonly disposing of them or directly them to unsound processing..
B6) Develop, implement and evaluate training strategy for public and recycling enterprises (based on Outcome C results) as well as states governments. Training will be directed to better manage waste in the public and the municipal governments. Strategy will include development of E-waste management guides for best practices for e-waste collection separation and disposal in municipalities and for recycling enterprises to environmentally sound processing.
B7) Characterize nationwide recycling industry, including listing and characteristics of industries, establishment of a registration and certification system to ensure the adoption of environmentally sound e-waste management practices.
B8) Establishing of nationwide e-waste information exchange platform, linking waste streams and safe processors .

Outcome C) Demonstration of POPs release minimization in formal recycling and informal recycling of e-waste

The activities to be carried out in this outcome are:
C1) At least two demonstration pilot projects involving application of BAT/BEP in formal recycling facilities will be developed, based on a screening assessment of candidate recycling plants, with an emphasis on separating Brominated Flame Retardants from e-waste streams incluing demonstrating of how a good operation can work and deelopment of a best practice guide.
C2) At least two Demonstration pilot project in informal recycling plants or clusters will be implemented, which will also be selected from different operations and the objective will be to bring the chosen operation up to an environmentally sound operational and compliance level.
C3) Development of a feasibility study and design of pilot facility for precious metals extraction in partnership with a private sector proponent.

Component 3. Reducing risks through elimination of POPs pesticides stockpiles and wastes

This component will focus on the activities to reduce risk from exposure to POPs pesticides, stockpiles, wastes and contaminated sites as well as addressing other obsolete pesticides stockpiles through the elimination of currently accessible OP stockpiles and waste as well as initiate work on POPs pesticide contaminated sites in a systematic fashion. The first step in this is updating and development of relevant inventories followed by environmentally destruction of stockpiles and waste, and assessment and containment/remediation of priority contaminated sites. Associated with this will be development of an integrated management system and development of national programme

to address contaminated sites.

Outcome D) Provincial POPs pesticides Waste Management Plan establishment and tested in selected provinces

Activities of this outcome are:
D1) Update detailed inventory of remaining POPs pesticide stockpiles and associated waste and analytical estimates of POPs prepared: This will involve consolidation of information available from the principle historical holders of POPs and general obsolete pesticide inventories as well as establishing secure care, custody and financial/liability arrangements particularly considering the historical state involvement and current private sector role.
D2) Inventory, initial prioritization screening and risk assessment of POPs pesticide contaminated sites produced including training on site assessment for relevant government officials and service providers: In association with the confirmatory inventory of POPs stockpiles and wastes the identification, screening site and risk assessments will be undertaken on historical and current locations at which or where POPs pesticides may have been manufactured formulated, packaged, stored and distributed. This will include training of relevant officials, owner and service provider staff in basic site and risk assessment techniques utilizing international standards and guidance materials.
D3) Waste Management plan from identification through to destruction for pesticides designed and tested at state pilot scale: This will design and test an integrated management system providing service capability in the identification through to destruction for obsolete pesticides, including POPs pesticides at state pilot scale, in three States, Chiapas, Sinaloa and Jalisco

Outcome E) Substantial elimination of remaining POPs pesticide stockpiles and POPs wastes in Mexico

Activities of this outcome are:

E1) Assess qualification of cost effective commercial options for the environmentally sound destruction of POPs pesticide stockpiles and wastes consistent with international standards: This will cover a systematic assessment of POPs pesticide stockpiles and waste destruction options available commercially both domestically and in the export market inclusive of potential qualification of domestic facilities as required against international standards and guidelines, specifically those issued by the Basel Convention and GEF STAP. The principle result will be a short list of viable and likely competitive commercial options supported by technical specifications defining the required environmental performance and due diligence/safeguards requirements to be applied during competitive bidding of destruction under E2.
E2) Complete environmentally sound destruction of at least 400 t and up to 1,000 t of POPs pesticide stockpiles and waste. This will cover the actual environmentally sound destruction of the available inventories of POPs and general obsolete pesticide stockpiles and wastes utilizing competitively selected and technically qualified commercial facilities. GEF funding for this will be used to supplement substantive national co-financing from the government and private sector.
E3) Develop feasibility study of present processes for recycling of pesticide used containers, considering technological and economical aspects

Outcome F) Containment/remediation of priority POPs pesticide contaminated sites and national program to address remaining sites.
Activities of this outcome are:
F1) Develop and implement detailed remediation plans on up to 3 priority POPs pesticide

contaminated sites: Utilizing the result of D2 above, three high priority sites will have detailed containment/remediation design work, inclusive of cost estimates done such that immediate action to mitigate the risks of POPs exposure and release can be mitigated as part of the project, including a risk assessment study.
F2) Develop first phase remediation plans for up to 10 POPs pesticide contaminated sites developed. Utilizing the results of D2 above, preliminary containment and remediation plans on 10 additional POPs pesticide contaminated sites will be generated and implementation arrangements including identification of clean up financing will be identified.
F3) Develop and adopt of a national program for ongoing management of POPs pesticide contaminated sites: Utilizing the information from the above, a national program for addressing contaminated sites generally with specific emphasis on POPs contaminated sites will be developed and introduced for adoption at the state and national level.

Component 4. Obsolete pesticide management capacity strengthening

This component will have as objective to strengthen capacities within state level authorities for inspection and enforcement, and for end users on operational management of obsolete pesticides generally, including handling and disposal of used containers and ensure sustainable ongoing programmes covering obsolete pesticides are in place in the country.

Outcome G) Institutional strengthening at provincial level for obsolete pesticides management delivered

Activities of this outcome are:
G1) Undertake assessment of national institutional capacities for establishment of obsolete pesticide management plans at state level: A national capacity assessment and gap analysis will be conducted on current programs at the state and national level related to identification, capture and environmentally sound management of obsolete pesticides. This will serve to identify priorities and action plans requiring on-going attention as well as initiate implementation of public-private partnerships based on steward ship and extended producer responsibility utilizing programs operating in other NAFTA countries at the state and provincial level.
G2) Develop outreach and training programmes on obsolete pesticide management for pesticide end-users and waste management and law enforcement government officers: This would cover training programs potentially based on the materials and training tools available through FAO to expand the knowledge base of officials, end users and service providers at the field level.
G3) Update national pesticide waste management guidelines, including reporting formats: The present guidelines will be reviewed utilizing the results of G1 above and updated to fully reflect international practice and lessons learned.
G4) Deliver reinforcement of State and municipal level obsolete pesticide and used containers collection programme: the present state level used pesticide container programs will be reviewed and changes implemented reflecting current experience with such programs in other NAFTA countries as well as Latin American countries such as Brazil..
G5) Develop a national replication program for sustainable obsolete pesticide management. This will collect the results of state level work in the above activities along with the results of the national capacity assessment and gap analysis to develop a national program for promulgating an effective and sustainable system of obsolete pesticide management nationally

Baseline Project:

The Baseline project is defined by the efforts of a number of stakeholders, external donors and the government's current and continuing program funding which is assumed to be available in the absence of GEF funding. Following describes what actions would be undertaken in baseline project.

Component 1: Strengthening Institutional and Public policies and capacities regarding POPs and sound chemicals management

Outcome A: National legal and regulatory framework strengthened and Enforcement Capacity of Stockholm Convention obligations enhanced.

Much of A1 and A2, the main legal review, gap analysis, and amendment of the regulative framework governing the management of pesticide waste and of e-waste together with organizing the coordination between Federal and State will be undertaken by baseline project funding. The GEF funding will be used ensuring that decisions taken are done through well researched options based on best available international experiences and approaches, and specifically support integration of these national efforts ensuring that Stockholm Convention chemicals and their releases are given due priority within the national SCM framework.

For A2, A3 and A4 the baseline project could undertake organization of required training as well as undertake basic analysis instrument procurement. The GEF grant will ensure that the training goals, trainers and training materials will cover key issues to manage POPs release reduction in targeted areas and facilitate the transfer of international experience and resources to these activities that otherwise might not occur.

For A5, the baseline funding would largely cover the support for required SC reporting and information exchange with GEF support providing modest advisory and facilitation resources to expedite this work in a timely fashion

Component 2: Reduction of POPs releases from e-waste processing at State and waste processor levels

Outcome B) Development of State level e-waste management plan in Nuevo Leon, Jalisco and Federal District of Mexico City

The Baseline project will cover most activities under B1-B8 as this relates to organization of e-waste management at State level among authorities. The state level regulative amendments will feed from Outcome A and the organization of waste generation inventory work as well as information dissemination and outreach on e-waste management is already being initiated and will be further strengthened. There are ongoing plans for assessing options for using economic instruments (B2) as well as e-waste exchange platforms (B8). However, these components together with ensuring the quality State level e-waste disposal guidance require some external input based on international and specifically OECD country experience with WEEE diversion/capture and EPR schemes

Outcome C) Demonstration of POPs release minimization in formal recycling and informal recycling of e-waste settings

In the baseline project two out of the three target States, Baja California (Tijuana-Mexicali cluster) and Federal District or the State of Mexico (México City), have started activities to develop management plans for e-waste as well as investment in new and upgraded facilities. However, these efforts currently lack coordination, and international inputs in relation to experience, technology and best practice, all of which would be the focus of the

GEF participation such that the results are sustainable, comprehensive and aligned with progress on the use globally.

Some existing formal recycling facilities are initiating upgrading their dismantling and separation processes as well as hardware although this is mainly aimed at increasing recovery rates for commodity metals, with less emphasis given to management of UPOPs and other PTS (mercury, lead) releases. The GEF involvement will ensure this incremental step in processing is provided for through both introduction of relevant BAT/BEP and using modest grant funding to leverage the required national investment. In the case of informal e-waste management operations, the baseline project is limited to minor improvements in burning cables as well as minor steps for limiting direct exposure from combustion and re-casting process emissions. The GEF grant is planned to showcase incremental improvements in environmental performance and workplace health and safety practice through reorganization and investment in targeted high POPs, and heavy metal, releasing operations.

Component 3. Reducing risks from POPs Pesticides stockpiles and wastes

Outcome D) Provincial POPs pesticides Waste Management Plan establishment and tested in selected provinces

In relation to Outputs D1 and D2, in the baseline project would involve continued modest progress in developing better inventories but potentially without the level of coordination and due diligence with respect to care custody and liability arrangements that the incremental support of the GEF project would offer. Similarly POPs contaminated site identification; prioritization and development of a consolidated inventory would remain as fragmented efforts.

Further work will be undertaken on the updating national pesticide waste guidelines, based on the partial investigations, local knowledge and non-systematic research into current exposure and human burden.

In relation to Outputs E1, state-level pesticide management plans will be developed in Chiapas and Sinaloa but potentially in a fragmented and uncoordinated fashion over an indeterminate period. GEF funding will serve to both ensure consistency and timely implementation. Disposal action will be undertaken based within limits of time-lines given in the State management plans as well as national, state and private holder budget.

Outcome E) Substantial Elimination of POPs pesticide stockpiles and wastes in Mexico

In the case of Output E1, investigation environmental performance and capacity of the domestic disposal options for POPs and obsolete pesticide waste will be undertaken recognizing this would be a slow and perhaps poorly coordinated process that may result in deficiencies relative to international standards which would be the focus of GEF funding. In the case of Output E2, considering the poverty levels in targeted states it can be expected that the time over which disposal of the main pesticide stockpiles and waste would not occur immediately and extend over many years in baseline project are very long, and can be considerably accelerated with economic incentives in form of grant funding with the result that a comprehensive elimination program within the period of GEF-5 implementation can be achieved. Regarding Output E3, feasibility study of present processes for recycling of pesticide used containers, considering technological and economical aspects. Joint programmes of government and private companies, have so far worked in collection campaigns, but still require support and projection into a nationwide, technologically sound recycling schemes.

Outcome F) Containment/remediation of priority POPs pesticide contaminated sites and national program to address remaining sites.

Baseline project would be the evolving interest and action being taken in relation to past environmental liabilities in the form of contaminated sites in the country which, while acknowledged as a priority concern, is being addressed slowly and without any actual focus. The GEF project will serve to provide this focus through assisting in direction of national and private sector resources to the high profile POPs pesticide contaminated site issues and approaches how these can be best managed and remediated. While it is likely that some of these resources would be available over time, the leverage provided by the GEF funds will more rapidly mobilize baseline funding to the three outputs under this outcome.

Component 4. Obsolete pesticide management capacity strengthening

Outcome G. Ensuring sound district level POPs pesticide and associated waste management

In the baseline project government agricultural extension service as well as private sector vendor will provide guidance to district level distributers and end-users on sound pesticide use and management including proper storage and disposal practices. While it is expected that sounder practices for both storage and disposal of obsolete pesticides and empty containers are incrementally introduced in the areas, these will fall short of best practices in the foreseeable future particularly in the poorer states with lack of funds leading to improper use of both the chemicals and their containers. In particular, the GEF funding will stimulate the extension of now well established stewardship and EPR public-private initiatives operating with other NFTA countries to Mexico.

B. 2. incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund/NPIF) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

Mexico has legacy and modern environmental management capacity limitations common in larger rapidly industrializing high middle income countries. Notwithstanding progress in addressing these, the country is trying to rapidly transition to a level of environmental management equivalent to a fully developed, particularly in relation to its partner countries in NAFTA. This creates the priority requirement for Mexico to rapidly proceed with implementation of its original NIP and expand the coverage to “new POPs” and other rapidly emerging aspects of the issue. In the absence of external assistance and the leverage and international expertise it provides this would not be achievable. More specifically this involves dealing with remaining accessible traditional POPs legacies, specifically POPs pesticides, equipping itself with the regulatory and technical tools for ongoing management of POPs as a fully developed country, and addressing the growing and increasingly serious issue of E-waste management over a short period. In the absence of the stimulation and introduction of international technology and practice provided by the GEF funding integrated with substantial national co-financing this would only occur over a much longer period and potentially be less sustainable and comprehensive. The net result would be the significant global environmental benefits now achievable would be lost due to progressive continued releases of POPs into the general environment.

Component 1 is largely supported by baseline project funding with the modest GEF funding serving to support development work, information gathering and decision making being are based on well researched options considering best available international experiences and approaches, including integration of these national efforts within the national SCM

framework.

Component 2 is designed to use GEF funding to serve to coordinate currently fragmented and uncoordinated institution, technical capacity and infrastructure initiatives related to e-waste that are being initiated along with introducing international experience and best practices. This will take the form of consistent and expedited state level pilot E-waste management plans that can be replicated across the country, the development of pilot demonstration projects in the formal sector using GEF resources to leverage investment to specifically target POPs and PTS releases as well as stimulate domestic full recovery of high value materials, and fostering improved organization, integration and practices in the informal sector to prevent POPs/PTS releases and protect workers and local residents that would otherwise be more difficult without the leveraging of GEF grant funding and international experience. The project is addressing the POPs GEB incremental part of e-waste management. Proper e-waste management does not emit UPOPs, therefore the UPOPs emissions that originate from e-waste processing constitute the global increment for which GEf co-financing is applied for.

Component 3 will utilize GEF funds to ensure the required level of coordination and due diligence with respect to care custody and liability arrangements are applied to detail POPs pesticide inventory and legacy management is provided for. Similarly POPs contaminated site identification, prioritization and development of a consolidated inventory would be established on a formalized and sustainable basis rather than have a continuation of the current fragmented efforts. Additionally the GEF funds will serve to leverage rapid and environmentally sound elimination of current POPs and other obsolete pesticide legacies in a cost effective manner operating within a cost effective management system including established commercial POPs and obsolete pesticide destruction options.

Component 4 provides modest GEF support for improvement and upgrading of the long term programs currently in place for the management of obsolete pesticides and associated waste issues. This will specifically target the introduction of now well established stewardship and EPR public-private initiatives operating with other NAFTA countries to Mexico.

The project will provide substantial global environmental benefits, not the least of which is the elimination of up to 1,000 t of obsolete pesticides including at least 400 t of high concentration POPs wastes, something that will significantly contribute to the GEF-5 target for obsolete pesticide elimination. The other global environmental benefits while less quantifiable at this stage will contribute to the future release reduction of U-POPs through the environmentally sound management of E-waste in 65 g I-TEQ PCCD/F and avoiding 125-570 tons of PBDEs to be further diluted in the plastic recycling processes and final releases through plastic waste and environmentally sound containment/remediation of POPs contaminated sites avoiding POPs release to land and water resources.

The project represents a cost effective intervention by the GEF in achieving these global environmental benefits in that it will introduce competitive environmentally sound POPs management technologies and practices and leverage substantial national resources. In this context, the project and specifically the GEF intervention represents an opportunity both for the country and the GEF to achieve rapid advancement of the Stockholm Convention's objectives in a large industrializing country such that its progress to fully developed status in this area is achieved. As such the experience gained and lessons learned should serve as an example for cost effective replication in other such countries as they develop.

B.3. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF). As a background information, read Mainstreaming Gender at the GEF.":

Adequate Hazardous Waste Management in Mexico is a necessary condition for the wellbeing of its people in general, but especially for those whose daily activities require being exposed to these substances. This includes e-waste collectors and recyclers at waste dumps, agricultural workers, and people working in formal recycling industries. Decreased exposure will result in economic benefits for public health systems; will reduce health care costs, workdays lost, and human suffering.

Furthermore, the lack of adequate management presents an enormous biological risk from water or soil pollution that can damage biodiversity resources and ecosystems of global importance.

Gender Dimensions: Efforts to ensure the Sound Management of Chemicals, including Persistent Organic Pollutants (POPs), have important gender dimensions. In daily life, men, women, and children are exposed to different kinds of chemicals in varying concentrations. Biological factors — notably size and physiological differences 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 kinds of chemicals encountered, and the resulting impacts on human health.

Often, gender dimensions are considered to be 'women affairs', however UNDP considers "gender" to refers to the socially constructed rather than biologically determined roles of men and women (and children) as well as the relationships between them in a given society at a specific time and place.

With respect to the management of toxic chemicals in Mexico, it can safely be assumed that in Mexico the majority of workers in the agricultural and e-waste recycling sectors (including informal recolectors in waste dumps), are men. On the other hand, women and children, who spent most time within their communities, might be at greatest risk from close proximity to Waste Dumps and POPs pesticides contaminated areas.

These gender dimensions will need to be reflected at both project and policy-level interventions pertaining to the sound management of chemicals in general and the sound management of POPs in particular. Therefore, the PPG phase of the project anticipates assessing fully the gender aspects of the management of Toxic Waste and their disposal. The participation, representation and buy-in of vulnerable worker populations and local communities in the project's formulation and the incorporation of gender dimensions into project activities will be explored as per the "UNDP Technical Guide on mainstreaming SMC" and the UNDP guidance note on "The why and how of mainstreaming gender in chemicals management".

B.4 Indicate risks, including climate change risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the project design:

Risk		Risk Mitigation Strategy
Defined State governments none or low cooperation	L	The commitment from proposed states is solid at time being. Final selection and re-affirmation will be ensured by co-financing commitments.
Electronic OEMs not interested	M	National distributors possibly lagging commitment can be reinforced by support at international headquarters of OEMs
PROFEPA may not enforce control of POPs	L	With the legal gap analysis, a proposal and work will be developed to support on authorities coordination and enforcement

Legal modifications may take long time for adoption	L	Emphasis on development of regulative work in the beginning of project with proposal and follow up activities put in place.
Spread of POPs through increased Climate Change induced extreme weather (storms, hurricanes, etc.).	L	The risk of exposure to POPs (pesticides) will be reduced by eliminating all known existing stockpiles in the country and ensuring proper warehousing condition until final disposal

B.5. Identify key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:

Stakeholders	Project Implementation Role
SEMARNAT	Coordination of all activities, since waste management falls within its jurisdiction
SAGARPA	Support in implementation of component 3
AMIFAC	Support in inventory of Pesticides contaminates sites
Governement of States	Key allies to implement management plans for both wastes
OEMs and Recyclers	Allies in implementation of pilot demonstration cases
Community-based groups, particularly infomal sector collectors and recyclers	Key groups for ensuring that the ameliorated management practices are adopted through out value chain. Recipients of training and dissemination of best practices. Consulted and integrated in the overall recycling value chain for ensuring inclusiveness and sustainability.

B.6. Outline the coordination with other related initiatives:

This project will complement efforts started in 2006 with the initial POPs Pesticide inventory as well as study on e-waste streams in Mexico were developed. The inventories should be improved, expanded and done at a much higher level of detail to provide much needed information for the sound management of Hazardous materials.

The project will catalyze efforts to meet commitments under the Stockholm Convention that are presented in the National Implementation Plan, which include the total elimination of existing stocks of POPs pesticides, and improve existing POPs pesticide inventories to get an overview of the overall problem with POPs pesticides in Mexico as well as with the recently listed new POPs.

Currently public and private companies have been elaborating Environmental Management Plans, but additional needs to be done to improve the current scheme.

Mexico is currently implementing the GEF funded POPs project “Environmentally Sound Management and destruction of PCBs in Mexico”. The project has successfully improved the management practices of PCB containing equipment. Legal, normative and policy framework has been updated and enforcement capacity has been improved. A substantial quantity of PCBs (liquids and solids) has already been disposed of. The experience related to the improved management of PCBs is clearly relevant for this proposal, and large synergies between the two projects are expected to happen.

To disseminate lessons learned during the project activities will be coordinated with similar UNDP projects being implemented in countries throughout the region and globally. This cooperation happens through electronic means but also at meetings. Additionally, there are experiences in other regions where UNDP has provided technical and financial assistance for proper management and elimination of POPs pesticides, like in Nicaragua and Vietnam, and the experiences from newly approved PIF on e-waste management in China will also be built into this programme, and future exchanges of lessons learned and good practices is expected.

C. DESCRIBE THE GEF AGENCY'S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:

UNDP has a comparative advantage in the area of Persistent Organic Pollutants, in particular with respect to Capacity Building and provision of Technical Assistance, as well as management and destruction of hazardous materials. The proposed project will further benefit from UNDP's experience in integrated policy development, human resources development, institutional strengthening, and non-governmental and community participation.

The proposed project will introduce a comprehensive approach to Sound Chemicals management, spanning from legislative to technical assistance and awareness raising and partnership building for the sound management of Chemicals. Such elements are successfully being implemented in a number of UNDP POPs projects world-wide.

At the same time of this project being developed in Mexico, UNDP is involved in several countries like China, Egypt, Jordan, KSA etc, addressing sound e-waste management and the POPs release during the processing of Waste Electronic and Electrical Equipments (WEEE). The developing projects will share the experience and good practice among countries for sound management of WEEE.

In addition, UNDP is cooperating closely with the Basel Convention Secretariat on e-waste, particularly in the framework of Partnership on Computing Equipment (PACE) working group. Here UNDP is conducting e-waste surveys in Burkina Faso, El Salvador, Jordan and Serbia as a first step in establishing sustainable e-waste management schemes. The surveys include recommended action plans implemented by UNDP and partners. In Jordan these management schemes are put in place In its work on dealing with e-waste management UNDP has forged partnerships with bilateral partners in industrialized countries. In addition to the partners listed under the linkages section, UNDP has an expert facility with Swedish EPA that provides technical backstopping on both technologies and practical experiences and administering advanced EPR systems.

To date, GEF funding has been approved for UNDP-supported POPs pesticide activities in the following countries: Armenia, China, Georgia, Nicaraguaand Vietnam. UNDP supports these countries in:

• Strengthening legal frameworks and improving enforcement capacity pertaining to Sound Chemicals management by addressing gaps in national chemical management regulations and

creating an enabling environment for the environmentally sound management of hazardous waste/materials.

• Undertaking additional POPs pesticides inventories to identify remaining geographically dispersed POPs Pesticides and sensitive sites.

• Improving POPs pesticide management practices (such as handling, storage, transport, and destruction) by providing technical guidance on management and safe disposal of POPs pesticides and training for government officials, agricultural workers to ensure the sound management of POPS pesticides throughout their life cycle.

• Create open dialouges between government and civil society regarding the importance of sound management of chemicals,

• Implementing public awareness campaigns and communication strategies to support all of the above activities.

The proposed project will therefore benefit from UNDP's comparative advantages as a GEF agency in the implementation of POPs management and disposal related projects worldwide.

C.1 Indicate the co-financing amount the GEF agency is bringing to the project:

The United Nations Development Programme (UNDP) will contribute to the project US$15,000 (in-kind) for the preparation of the project. Moreover it will provide additional funding for of 40,000 US$ in-kind for the implementation of the project.

UNDP has already contributed with in-kind technical support and assistance for initial scoping meetings with Government counterparts and project stakeholders which took place in the preparation of this PIF and it will continue.

Considering the scope of the project, UNDP's in-house expert resources in Harzardous Waste Management programmes at country, regional and headquarters level will be mobilized and contribute towards project implementation. In addition to this, the Resident Representative functions and Country Office human resources and facilities will be available beyond strict cost recovery basis for the succesful project implementation. This value will be determined during the PPG phase.

UNDP's experience in integrated policy development, Capacity Development, institutinal strengthening and non-governmental and community participation will also benefit this project.

The value of all of the above can be expected to exceed US$ 55,000 during the life of the project.

C.2 How does the project fit into the GEF agency's program (reflected in documents such as UNDAF, CAS, etc.) and staff capacity in the country to follow up project implementation:

The project is in line with priorities of UNDP Mexico according to the The United Nations Development Assistance Framework (UNDAF) in Mexico (2011-2015), which identifies outcomes concentrated in four (4) priority areas, which will be achieved through the joint work of the Government of Mexico and the United Nations. These outcomes are:

(1) Diversification of production and participation in the global economy
(2) Environmental sustainability

(3) Equitable social development
(4) Democratic governance

The UNDAF identifies this four priority areas for cooperation. The proposed project fits well within priority no. 2:

“Move towards the implementation of sustainable development models that will foster conservation of natural resources and ecosystems, climate change mitigation and adaptation, and use of renewable sources of energy”.

Note: Environmental sustainability is considered a cross-cutting principle for all four priority areas.

Based on the experiences from implementing chemicals related projects, UNDP’s Country staff in Mexico is well positioned in terms of their understanding of POPs and PCB issues as well as sector knowledge for handling this project. The UNDP Mexico has an sustainable development unit that consist of one cluster manager and two Program Officers and combines on-the-ground experience of executing projects in experience within the environmental field and in project implementation, such as those related to CC, Biodiversity, POPs and multi-focal areas projects

From the Program side the project will be under the overall supervision of the Cluster Manager and supported by the Program Officers of The Environment and Disaster Risk Management Unit. The Manager also has experience relevant to this project in terms of capacity development and strengthening government/policy planning.

Implementation support on Operations will be provided through Procurement, Finance and Human Resources staff members under the direct supervision of the Operations Manager in UNDP Mexico.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Margarita Perez Villasenor	GEF Operational Focal Point Mexico	MINISTRY OF FINANCE AND PUBLIC CREDIT	**09/26/2012**

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.					
Agency Coordinator, Agency name	**Signature**	**DATE** *(MM/dd/yyyy)*	**Project Contact Person**	**Telephone**	**Email Address**
Adriana Dinu, Officer in Charge, UNDP-GEF		03/27/2013	Dr. Suely Carvalho	1-212-906-6687	Suely.carvalho@undp.org