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SEMARNAT
SECRETARÍA DE MEDIO AMBIENTE
Y RECURSOS NATURALES



United Nations Development Programme

Country: United Mexican States

PROJECT DOCUMENT¹

- Project Title:** Sound Management of POPs Containing Waste in Mexico
- UNDAF and CPD Outcome(s):** Direct effect 6. Environmental sustainability and green economy. All three levels of government, the private sector, academia and civil society will have strengthened their capacities to reverse environmental deterioration, and to sustainably develop natural resources through mainstreaming environmental sustainability, low emissions development, and green economy in the legislative, programming and decision making processes
- UNDP Strategic Plan Environment and Sustainable Development Primary Outcome:** Growth is inclusive and sustainable, incorporating productive capacities that create livelihoods for the poor and excluded
- UNDP Strategic Plan Secondary Outcome:** Countries are able to reduce and manage risks of conflict and natural disasters, including from climate change
- Expected CP Outcome(s):** (CPD 2014-2018) “Promoted risk disaster and low-emission, resilient and environmentally sustainable development strategies, with a gender and multicultural approach for poverty reduction and equity”. (Those linked to the project and extracted from the country programme document).²
- Executing Entity/Implementing Partner:** Ministry of Environment and Natural Resources (*Secretaria de Medio Ambiente y Recursos Naturales*, SEMARNAT)
- Implementing Entity/Responsible Partners:** United Nations Development Programme (UNDP)

¹ For UNDP supported GEF funded projects as this includes GEF-specific requirements

² This corresponds to CPD 2014-2019.

Brief Description

The five-year project will help Mexico to fulfil its requirements under the Stockholm Convention. Consistent with this objective, the project addresses POPs release sensitive e-waste stream in the recycling, dismantling and treatment processes of electronic waste (e-waste) and the environmentally sound elimination and management of obsolete POPs pesticides stockpiles. To achieve the project objective and outcomes, the project is structured in 6 components: Component 1 focuses on strengthening public policy and institutional capacities that will facilitate minimizing POPs releases particularly relating to e-waste generation and obsolete pesticides stockpiles; Component 2 covers the development of required infrastructure and the demonstration of BAT/BEP technologies in formal and informal recycling facilities with GEF support focused on introduction of international technology and capability; Component 3 addresses risks of POPs exposure through environmentally sound destruction of obsolete pesticides stockpiles and containment/remediation of priority contaminated sites; Component 4 strengthens capacities of State level authorities for inspection, enforcement and operational management, and develops obsolete pesticide management plans to ensure sustainability; Component 5 supports the monitoring and evaluation of the project and dissemination of experience gained; and Component 6 strengthens project management capacity to achieve implementation effectiveness and efficiency.

Programme Period:	60 months
Key Result Area (Strategic Plan)	
Atlas Project ID:	00092730
PIMS No.	4686
Start date:	1 September 2015
End Date:	31 August 2020
PAC Meeting Date:	
Management Arrangement:	National Execution (NIM)

Total Budget	\$28,820,000
Allocated resources:	
• GEF	\$ 5,720,000
• Government	\$
• Private Sector	\$ 7,300,000
• Other (to be confirmed)	\$ 3,461,250
In kind contributions:	
▪ Government	\$ 10,200,000
▪ State Government	\$ 2,083,750
▪ Multilateral Agency	\$ 55,000

Agreed by (Government):

Date

Agreed by (Executing Entity/Implementing Partner):

Date

Agreed by (UNDP):

Date

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Acronyms

AMIFAC	Mexican Union of Formulators and Manufacturers of Pesticides
AWP	Annual Work Plan
BANRURAL	Government Agriculture Development Bank
BAT	Best Available Techniques
BEP	Best Environmental Practices
BFR	Brominated Flame Retardant
CANIETI	National Chamber of Electronics, Telecommunications and Computing Industry (<i>Cámara Nacional de la Industria Electrónica, de Telecomunicaciones e Informática</i>)
CPU	Central Processing Unit
CRT	Cathode ray tube
DDE	<i>Dichlorodiphenyldichloroethylen</i>
DDT	<i>Dichlorodiphenyltrichloroethane</i>
EPR	Extended Producer Responsibility
ESM	Environmentally Sound Management
GEF	Global Environment Facility
GMS	General Management Services
GNP	Gross National Products
GoM	Government of Mexico
HCH	<i>Hexachlorocyclohexane</i>
INECC	National Institute of Ecology and Climate Change
INEGI	National Institute of Statistics and Geography
INIA	National Institute of Agriculture Research
Innecafe	Mexican Institute of Coffee
IR	Inception Report
IW	Inception Workshop
LCD	Liquid-crystal display
LGPGIR	General Law for the Prevention and Integral Management of Wastes (<i>Ley General para la Prevención y Gestión Integral de Residuos</i>)
M&E	Monitoring and Evaluation
NAFTA	North American Free Trade Agreement
NARAP	North American Regional Actions Plans
NGO	Nongovernmental Organization
NIP	National Implementation Plan (POPs)
NOM	Official Mexican Standard
NPD	National Project Director
OEM	Original Equipment Manufacturer
OG	Operational Group
OP	Operational Program
CSO	Civil Society Organizations
PBDE	<i>Polybrominated Diphenyl Ethers</i>
PC	Project Coordinator
PCBs	<i>Polychlorinated biphenyls</i>
PCDD	<i>Polychlorinated dibenzodioxins</i>
PCDD/F	<i>Polychlorinated dibenzo-p-dioxins and dibenzofurans</i>
PCU	Project Coordination Unit
PIR	Project Implementation Review
PMO	Project Management Office

PND	National Development Plan (<i>Plan Nacional de Desarrollo</i> , 2013-2018)
POPs	Persistent Organic Pollutants
POPP	UNDP Programme Operation Policies and Procedures
PPG	Project Preparation Grant
PROCCYT	Mexican Association of Phytosanitary Industry (formerly AMIFAC)
PROFEPA	Federal Attorney General for Environmental Protection (<i>Procurador Federal de Protección al Ambiente</i>)
PTS	Persistent Toxic Substances
PSC	Project Steering Committee
RTA	UNDP GEF Regional Technical Advisor
SAGARPA	Ministry of Agriculture, Livestock, Rural development, Fishery and Food
SAICM	Strategic Approach to International Chemicals Management
SC	Stockholm Convention on Persistent Organic Pollutants
SCM	Sound Chemicals Management
SEMARNAT	Ministry of Environment and Natural Recursos (<i>Secretaría de Medio Ambiente y Recursos Naturales</i>)
SMEs	Small and Medium Enterprises
TEQ	Toxic Equivalency
TV	Television
UMFFAC	Mexican Union of Formulators and Manufacturers of Pesticides
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UPOP	Unintentional Produced Persistent Organic Pollutants
USD	United States Dollars
WEEE	Waste Electronic and Electrical Equipment

1. SITUATION ANALYSIS

1.1 Problem to be addressed

Baseline Situation

Electronic Waste (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 exporting US\$71.1 billion, with a GNP of US\$6.2 billion, a consumption of US\$84.4 billion and employing over 247,000 people in over 700 electronic goods manufacturing companies in 2011. 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 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 32 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 and Climate Change (INECC) 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, under the assumption that only half of the total 300,000 to 500,000 tons electronic products goes into some sort of recycling or disposal, while the rest remains stored in households. It was found that this value was estimated to have increased to 360.000 tons in 2010 (Instituto Nacional de Ecología, 2010). The amount of e-waste distribution in the five 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 Industry³ is: metals (60.2%), plastics (15.2%), metal/plastic mixtures (5.0%), 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. Through investigation and survey activities conducted during the PPG stage of this project, it estimates that e-waste generation nationally in 2013 has increased to between 613,643 to ~753,205 metric tons per year, calculated depending on 2 methods of using consumption and trade balance data, and makes it possible to determine linearly the amount of e-waste generated per inhabitant at 5.9 kilograms per year. This estimation is based on some six different electronic goods: TV equipment (LCD, CRT, other), Computers (CPU, monitors and tablets), audio reproducers, mobile phones, entertainment devices and internet access devices. To this, it should add the recent change in Mexico of analogic into digital TVs (by government regulation) that will bring about the switch and the consequent disposal of about 50 million units of TVs (500, 000 tons) in 2014-2015.

3. Import of e-waste to Mexico for recycling 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, it could be 5% of the amount of e-waste generated in México.

4. However, as determined in the PPG phase, the amount of e-waste generated is 613,643 to ~753,205 metric tons per year, and by knowing that about 90 percent of e-waste are TV sets and computers containing polybrominated diphenyl ethers (PBDEs) of the order of 18,000 mg/kg, the mass flow of PBDEs contained

³ 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.

in e-waste in Mexico is between 696 - 854 tons. By starting with this high mass flow baseline of PBDEs, considerable amounts of PCDD/Fs releases may occur from e-waste processing given the prevalence of burning of these plastic components under uncontrolled conditions.

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 40-50 enterprises engaged in the recycling business, among them, 25 are identified and registered as recyclers, located mainly in the metropolitan areas, mainly Mexico City, Guadalajara (Jalisco State) and Tijuana (Baja California) with a total capacity of slightly over 13,000 tons/year. The others operate mostly under informal patterns. The 25 registered recyclers only pre-process computer waste, specifically printed circuit boards which are shipped overseas to be finally recovered in other countries, leaving the rest as waste. Processing for recycling (and disposal) consists mainly in scrap hand separation, crushing, grinding, and in some cases air and/or water separation of streams. Final recycling of materials is performed in foundries or else, out of the country for precious metals. Neither pyrometallurgical nor hydrometallurgical processes are in place to separate pure metal stream components other than the foundries that recover base metals, such as aluminium, copper, lead and other. There exist about 700 foundries of different metals in the country, which by their nature, they do scrap metals recycling. On the other hand, plastics recycling facilities are also available in the country. However, their processes are not considered environmentally sound for POPs (PBDE) management. Final waste from the recycling operations is disposed of in municipal dump sites. There is no knowledge of what was done to plastics with PBDEs. The other facilities only do collection (calling themselves “recyclers”). Recyclers operate, in the best of cases, with a permit issued after going through Environmental Impact Assessment when they established their facilities. Additionally, there are no formal chains for the collection and logistics for them, all of it being informal and some are 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 and facilitated by state governments. The costs of e-waste recycling, and of elimination of the hazardous waste fraction is difficult to determine at this stage. This does not permit the estimation of the cost of PCDD/F avoidance either.

6. Emission factors were calculated in the PPG phase for the burning of e-waste metal-plastic mixtures or plastic waste fractions, which make up a considerable percentage of e-waste fractions (5 and 15.2 % respectively) and could be responsible for significant releases of POPs.

7. Overall it is estimated that Mexico generated and disposed of between ~613,643 to ~753,205 tons of e-waste in 2013, 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: $(613,643 \text{ and } 753,205) * 0.035$ (2% weight fraction cables plus 5% metal/plastic mixtures, at 50% each) $* 5,000 \mu\text{g TEQ/t} = 246.6 \text{ and } 287.5 \text{ g TEQ/yr}$ in polychlorinated dibenzodioxins/dibenzofurans (PCDD/F) emissions (emission factor for open burning of cables: $5,000 \mu\text{g TEQ/t}$, UPOPs Toolkit Cat. 2, Class m), while the uncontrolled burning of circuit boards could be responsible for: $(613,643 \text{ and } 753,205) * 0.017$ (1.7 % weight fraction circuit boards) $* 930 \mu\text{g TEQ/t} = 9.7 \text{ and } 11.9 \text{ g TEQ/yr}$ in PCDD/F (emission factor for open burning of mixed e-waste: $930 \mu\text{g TEQ/t}$, Hedlund et al. 2005).

8. As such total uncontrolled PCDD/Fs emissions from e-waste processing of cable, plastics and circuit boards alone, as determined in the PPG phase, would total ~ 256.3 and 299.4 g TEQ/yr from the process of thermal recovery of cable and open air burning of plastics, calculated utilizing UNEP's Guide and the national waste generation data. As a reference, during the preparation of NIP, estimations were made for 2004 PCDD/F emissions in an interval between 238 and 3,039 g TEQ/yr, with an average of 712 g TEQ/yr. 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 Ecology and Climate Change, INECC, 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 ~ 696 – 854 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, however, PBDE/F is most 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 the levels found in low exposure countries (Pérez-Maldonado et al, 2009)⁴.

11. The Mexican government has a high interest on e-waste sound management and is presently requiring the preparation of “Waste Management Plans” which are instruments that establish 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, and those plans are an important part of the solution incorporating also the Original Equipment Manufacturers (OEMs) in those plans.

12. Additionally, Mexico has a strong mining-metallurgical industry. Various metal refiners operate, and produce copper, secondary aluminum, lead, steel, silver and gold. Some pilots have been run by those companies along the years processing e-scrap, mainly to recover copper and precious metals. Therefore, those companies can constitute a natural ally to process (in the final form of recycling) e-waste. They become natural cofinancing partners.

Legislation on e-waste management

13. There are no specific regulations in Mexico that require manufacturers to ensure sound management of chemicals in electronic goods, besides the Environmental Impact Assessment that has to be elaborated when the facility is started. The General Law for Prevention and Integral Management of Waste 2003 (*Ley General para la Prevención y Gestión Integral de Residuos*, LGPGIR) is still in the process of implementation and enforcement. Two important barriers for implementation of e-waste sounder management 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, Article 19, paragraph VIII). In case of “special management” waste, a Management Plan must be developed and volumes of waste reported to State governments for enforcement of the regulation. These Plans can be developed and implemented by States governments, enterprises or groups of them, and large electronic goods traders. Currently, only eight out of the thirty two States have state laws governing special management waste, including electronics, but none have Management Plan prepared. In spite of this situation, LGPGIR establishes as well that Management Plans must be developed for large volume specific wastes, such as in this case, e-waste.

14. 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 promotes “purchasing of commercial products that contain recyclable or returnable materials”.

15. 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 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

⁴ Exposure assessment of polybrominated diphenyl ethers (PBDEs) in Mexican children, *Chemosphere* 75 (2009) 1215–1220

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 Mexico. No legislation similar to that covering WEEE or RoHS is in place in Mexico at this time.

16. 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 covered in the 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, and iv) Mexico's location relative to high e-waste exporting markets. Stockholm Convention NIP Update is still under progress in Mexico, the Update will certainly include sound management of e-waste as a priority area to be addressed.

Pesticides

17. 50,000 tons per year of commercial pesticides are produced in Mexico by the large companies affiliated to PROCCYT (formerly 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), which are now grouped into another association with other entities, in an organization called Amocali-Campo Limpio, totalling the production at 65,000 tons 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.

18. 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 stocks remained stored for long period 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.

19. Official inventory of obsolete pesticides from the last official update that took place in March 2012 is 308 metric tons. Table 1 below shows the inventory of obsolete pesticides and the locations of the stocks as obtained in the official update by SEMARNAT conducted in March 2012.

Table 1: Inventory of Obsolete Pesticides by State or Federal Entity

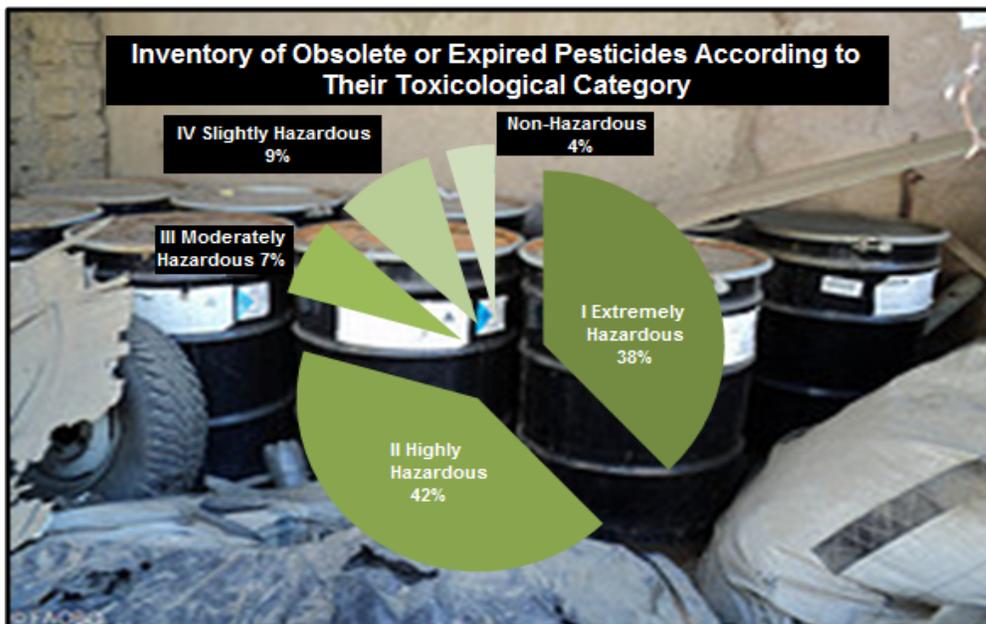
State or Federative Entity	Quantity (tons)	State or Federative Entity	Quantity (tons)	State or Federative Entity	Quantity (tons)
Aguascalientes	2.61	Guerrero	4.95	Quintana Roo	1.88
Baja California	0.38	Hudalgo	7.74	San Luis Potosi	0.00
Baja California Sur	16.29	Jalisco	5.10	Sinaloa	1.30
Campeche	5.53	State of Mexico	3.60	Sonora	9.85
Coahuila	4.11	Michoacan	22.90	Tabasco	4.06
Colima	15.48	Morelos	8.75	Tamaulipas	0.36
Chiapas	4.51	Nayarit	4.60	Tiaxcala	2.81
Chihuahua	1.63	Nuevo Leon	3.24	Veracruz	50.63
Federal District (DF)	0.77	Oaxaca	9.32	Yucatan	1.06
Durango	104.24	Puebla	3.52	Zacatecas	5.26
Guanajuato	0.47	Queretaro	0.63		
Total: 307.56 tons					



20. The 308 tons can be divided into five categories: 1) extremely hazardous, 2) highly hazardous, 3) moderately hazardous, 4) slightly hazardous, and 5) non-hazardous. Table 2 below shows the classification of the pesticide inventory according to toxicological category, in accordance with categories established by the World Health Organization (WHO):

Table 2 Classification of Pesticide Inventory in Mexico

Category	Tons	%
I Extremely hazardous	116.37	38
II Highly hazardous	127.77	42
III Moderately hazardous	22.23	7
IV Slightly hazardous	27.62	9
Non-hazardous	13.58	4
TOTAL	307.56	100



21. However the real number based on joint estimations (but not yet confirmed pending findings of updated inventory at project implementation) of the government and the association of pesticide producers, is of at least 1,200 tons, out of which about one third, i.e. 400 tons, are DDT and HCH. In addition, a significant part of the rest may be POPs pesticides combined with non POPs pesticides. Considering the amount of pesticides produced in the country was 65.000 tons per year, if it is considered that only 1 percent of that amount remained unapplied, then there would have been about 650 tons of obsolete stock per year.

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

- Facilities that are 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 Governmental 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; and
- National Institute of Agriculture Research (INIA).

23. 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 environment exists. Recent studies published in technical literature reported 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 $\mu\text{g m}^{-3}$): 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).

Legislation for Pesticides and POPs

24. 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.

25. Since 1991 Mexico has forbidden import, manufacture and selling of aldrin, dieldrin, endrin and mirex. Heptachlorwhile HCB and toxaphene have not been registered, for which reason their manufacture, use and commercialization are currently prohibited. Since 1991, DDT and chlordane officially have restricted use. However as a result of the development of regional plans, their commercialization and use were voluntarily withdrawn in this country. Lindane was subsequently forbidden.

26. 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 reasons described below:

- The national pesticide producers used to be nationally owned enterprises. These were 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-financing 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 scattered 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.

27. . The elimination strategy must include the selection of destruction technologies that are proven to be most appropriate in accordance with the type and volume of obsolete pesticides that have been identified.

National Institutional and Legal Framework

28. 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.

29. The endorsed NIP formed the basis for inclusion of POPs elimination as part of the Mexican Government's National Development Plan 2007-2012 and was also 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 formed part of the National Programme for Prevention and Integral Waste Management (2008-2012), particularly regarding implementation of NIP action plans for pesticides, development and maintenance 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 in order 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 is required for their management. POPs release from e-waste management was not considered at the time the NIP was developed, but the Government had ascertained that they will be inserted into the updating of NIP which will be completed in the second half of 2015, considering new POPs listing. This is already considered as a part of the new government National Development Plan 2013-2018 and of the Environmental Sectoral

Programme 2013-2018, as part of the Government's fulfillment of the obligations under the Stockholm Convention.

30. POPs elimination forms part as well of the NAFTA environmental agreement activities, and therefore as national policies for over 10 years and is in continuous 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 project are aligned with those aims.

31. As a party to the Stockholm Convention on Persistent Organic Pollutants, Mexico needs to adjust its legal and institutional system to be in compliance with its obligations set out in the international convention.

32. Institutionally, there is a universe of only about 600 inspectors at the Federal Environment Attorney (PROFEA), which enforce regulations in all environmental areas in the entire country, from forestry through water to waste. A similar number of inspectors could be added when State level enforcement agencies in all country are considered. An undetermined number of customs inspectors also form part of the enforcement authorities.

1.2 Root Causes and Barriers Analysis

33. In Mexico, electronic waste is currently of great importance and demands urgent action for sound management ever since it was included in the LGPGIR due to the consistent growth of quantities generated, along with the considerably decrease in the apparatus replacement cycle. E-waste has the potential of containing persistent toxic chemical contaminants such as POPs and other brominated flame retardants, heavy metals, etc. which will be released into the environment through improper treatment and residual waste disposal processes. Improper treatment processes also cause the release of other types of POPs such as dioxins, posing serious threats to the ecological system and the human health at the dismantling sites and further to global commons.

34. While the import, manufacture, formulation, commercialization, and use of POPs pesticides in Mexico have been either prohibited or restricted, the POPs pesticides found in Mexico can be considered as obsolete pesticides which in accordance with Article 35 of the LGPGIR are considered hazardous wastes and therefore their integral management including their final disposal, is the responsibility of the owner or possessor and it must be carried out according to any and all applicable legal provisions.

35. 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 that 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 hazardous and for special management wastes (The management plan implemented for PCBs using GEF assistance is a model for this).
- Applicability of similar economic and stewardship concepts (i.e. a form of Extended Producer Responsibility, EPR).
- 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 environmental protection, PROFEPA.
- Common issues related import/export need to be addressed.

36. Primary end of life challenges for electric and electronic equipment in Mexico (in particular for the management of substances of concern) are:

- Present legal classification of e-waste not as hazardous waste but as “special management waste”, which is not aligned with the Stockholm and Basel Conventions, in which some e-waste streams are classified as hazardous according to their POPs contents and/or toxic metals.
- Absence of EPR system for the management of e-waste.
- Lack of regulatory framework and of widely adopted standards in Mexico affecting environmentally sound management and law enforcement of such materials to prevent improper management of those substances.
- Lack of dialogue between government and stakeholders such as OEMs, importers, recyclers, and entities involved in waste electronic and electrical equipment (WEEE) collection, as a consequence of the obstacles indicated above.
- 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 management 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.

37. 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.
- Need to secure the identified stockpiles pending their final destruction actions.
- Obsolete pesticides 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).
- Need to manage and reduce ongoing obsolete pesticides generation and absence of EPR system to support this as in other NAFTA countries.

38. 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 as summarized in the Project Results and Resources Framework.

2. STRATEGY

2.1 Strategy to Address E-waste and POPs Pesticides

39. 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.

40. The objective of the project is to minimize impacts on health and the global environment through sound chemicals management and reduction of POPs releases and exposure to POPs from e-waste and pesticides management operations in Mexico. To achieve this objective, project activities will include 4 main components. Component 1 will address national and state level regulatory and legal framework to strengthen capacities for enforcement and compliance of sound management of POPs chemicals. Component 2 aims to develop and implement State Pilot level e-waste management plans in three States (Baja California, Jalisco and Federal District of Mexico City) which will have the important purpose among others to foster efficient and effective collection of e-waste and to manage it appropriately; to conduct demonstration pilots in at least two formal recycling facilities to ensure that international best practice experience and technology options (BAT/BEP) are considered; and to undertake demonstration pilot plans in two non-formal recycling facilities to bring them to implement environmentally sound processing. The demonstrations will achieve reduction in POPs release from e-waste processing. Component 3 will update inventory to accurately identify the quantities and locations of obsolete pesticides stockpiles in Mexico so as to carry out environmentally sound destruction with available domestic technical expertise and at local facilities to substantially eliminate the 400 tons POPs pesticide stockpiles already identified in SEMARNAT's March 2012 official update, and may lead to the elimination of up to 1,200 tons pending the findings of an inventory updated to be carried out during implementation of this project; to develop containment/remediation plans at certain priority contaminated sites, and develop national programme for ongoing management of the remaining contaminated sites. Component 4 activities will strengthen institutional capacities at provincial level for obsolete pesticide management, and to develop national replication programme for sustainable obsolete pesticide management. In addition, Component 5, monitoring and evaluation, and Component 6, programme management, will facilitate successful implementation of project activities to achieve project objective and outcomes, and to ensure sustainability of project achievements.

41. Because of the legislative, organizational, technical and capacity issues, a real national effort has to be established to address e-waste in Mexico. Starting with the Management Plans by the States (since the OEMs are not convinced still, as e-waste is not yet classified as hazardous waste) and the Plans include also communication strategies for consistent and permanent e-waste collection campaigns. On the government side, actions will be taken to modify regulations in accordance to Stockholm and Basel Conventions, to push interest on the manufacturers for law fulfillment. On the "market" side, once an inventory is well determined, the regulations modified (to make compulsory the sound management as hazardous waste) this will push the investors in the country to establish more recycling facilities (from the calculations, taking into account installed capacity and estimated inventory) would be of two orders of magnitude with respect to the existing, that is 30 or 40 times more. The project will focus on showing these efforts. The interest to make business, combined with law enforcement, will give impulse to this goal.

2.2 Relevant UNDAF Effects

42. The United Nations Development Assistance Framework (UNDAF) 2014-2018 determined six areas of cooperation between the UNDP and Mexico. This project greatly contributes to the area of the environmental sustainability and green economy (Cooperation Area 3).

43. This Project has a direct impact on:

- The strengthening of the legal and regulatory frameworks as well as policies and programmes for environmental stewardship.
- Planning and consolidation of local frameworks for the management of chemical contaminants and POPs.
- Analysis, design and implementation of activities oriented towards the strengthening of resilience in societies, ecosystems and urban areas, reducing vulnerability and risks linked to climate change and disasters.

2.3 Project Rational and Policy Conformity

44. 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 3 through the following interventions:

Relevant GEF-5 Strategy Outcome/Indicator	Project’s Contribution
CHEM-1 Objective “Phase out POPs and reduce POPs releases”	
<p><u>Outcome 1.3</u> POPs releases to the environment reduced.</p> <p><u>Indicator 1.3.1</u> Amount of unintentionally produced POPs releases avoided or reduced from industrial and non-industrial sectors; measured in grams TEQ against baseline as recorded through the POPs tracking tool.</p>	<p>Project Component 2: “Reduction of POPs release from e-waste processing at State and waste processor levels” will develop state level e-waste management plans in 3 States: Baja California, Jalisco and Federal District of Mexico City. The project will reduce the emissions of PCDD/F by about 42 g TEQ per year (which are about 15 % of estimated emissions from e-waste) and would reach up to 89 g TEQ per year when the government subsequently implements the National Replication Programme developed under this project. It would also lead to avoiding the releases of PBDEs through improved management practices, namely elimination of open burning of plastic residues poorly controlled, noting they are not currently classified as an unintentional POPs release.</p>
<p><u>Outcome 1.4</u> POPs waste prevented, managed, and disposed of, and POPs contaminated sites managed in an environmentally sound manner.</p> <p><u>Indicator 1.4.2</u> Amount of obsolete pesticides including POPs, disposed of in an environmentally sound manner; measured in tons.</p>	<p>Project Component 3: “Reducing risks through elimination of POPs pesticides stockpiles and wastes” will lead the establishment of a National POPs Pesticides Management Plan that will be implemented and evaluated in selected provinces. The project will provide for the environmentally sound destruction of at least the 400 tons of confirmed inventory of POPs pesticide stockpile. 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.</p>
CHEM-3 Objective “Pilot sound chemicals management and mercury reduction”	
<p><u>Outcome 3.2</u> 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</p>	<p>Project Component 1: “Strengthening institutional and public policies and capacities and capacities regarding POPs and sound chemicals management” serves to strengthen, refine and integrate the national regulatory and institutional system</p>

Relevant GEF-5 Strategy Outcome/Indicator	Project's Contribution
<p>of significant adverse effects on human health and the Environment.</p> <p><u>Indicator 3.2.1</u> Countries implement SAICM relevant activities that generate global environmental benefits and report to the International Conference on Chemicals Management.</p>	<p>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.</p>

2.4 Project Consistency with National Priorities Plans

45. National Development Plan (Plan Nacional de Desarrollo, PND) 2013-2018 that was published end of 2013 establishes as one of their Goals (which becomes essential part of the Environmental Sectoral Programme for the same period): Objective 4.4 of the National Development Plan 2013-2018 (PND) "To impulse and orientate towards an inclusive and facilitating green growth that preserve our natural patrimony and at the same time generate wealth, competitiveness and employment."

46. Environmental Sectoral Programme Objective 5. "To stop and revert the loss of natural capital and to avoid water, air and soil pollution", with Action Lines: 1.2.4 "To generate and promote financial instruments to impulse projects that contribute to the green growth of the country;" 1.4.1 To impulse a green growth that preserves the natural capital of the country and at the same time promotes productivity increments;" 4.2.8 "To promote and generate green employment sites of high productivity;" 5.3.2 "To develop and update legal and promotion instruments to strengthen integral management of materials, hazardous waste and to restore contaminated sites;" 5.4.2 "To give impulse to widen the coverage of infrastructure for integral management of urban, special and hazardous waste;" 5.4.5 "To impulse recycling activities from recovered materials from waste;" 5.4.6 "To impulse development and implementation of National Management Plans for priority waste streams;" Indicator 15. "Index of waste integral management;" 6.7.1 "To warranty proactive, leader and detonating of higher benefits from multilateral agreements; and to impulse widening of coverage of infrastructure for integral management of urban, special and hazardous waste and to develop and update legal and promotion instruments to strengthen integral management of materials, hazardous waste and to restore contaminated sites."

47. Chapter 4, paragraph 5, of the Political Constitution of Mexico, recently modified (8 February, 2012), states: "All people have the right to a healthy environment for their development and wellbeing. The State will warranty to respect this right. Damage or deterioration of the environment will generate liabilities for those who provoke it in terms of what is established by this Law."

48. The State has the above obligation through laws and standards that correctly classify hazardous waste. This will include a principle of "progression" that is understood as the prohibition of "regression", which indicates that once an advance for the rights is achieved, the State cannot bring it back. From the point of view of this principle, protection of a healthy environment is also recognized in Basel and Stockholm Conventions for control and elimination of those hazardous wastes, in the case that they are identified as such. It is considered that the LGPGIR contravenes this principle of "progressivity" when it classifies the e-waste as "special management waste," which contain substances that are classified as hazardous in the Conventions.

49. Therefore, referring in more detail to the Chapter 4, in a detailed analysis of its contents, in the captions in Spanish of "provoque", which is: "to do a thing or an action that produces another as a reaction or response to it." From this perception of Article 4, it gives the order to establish the Extended Producer Responsibility, since the damage is not a unitary act from which generates the waste but a complex process that includes the full life cycle of the electronic device, which is related to its components, manufacture,

commercialization, use and reuse among other elements, which approaches more to the legal instruments that already exist in European or Latin-American laws. The responsibility from the designer to the final user in direct way should be therefore extended, including as well the authorities and sellers. The article 4, obligates to update Mexican laws, Federal and States, through reforms that should change the criteria that limits responsibility only to those who generate the waste and to build a Mexican model of extended responsibility, based in all stages and acts that provoque the environmental damage by specifically defining responsibilities of authorities and private and public producers, individually and collectively.

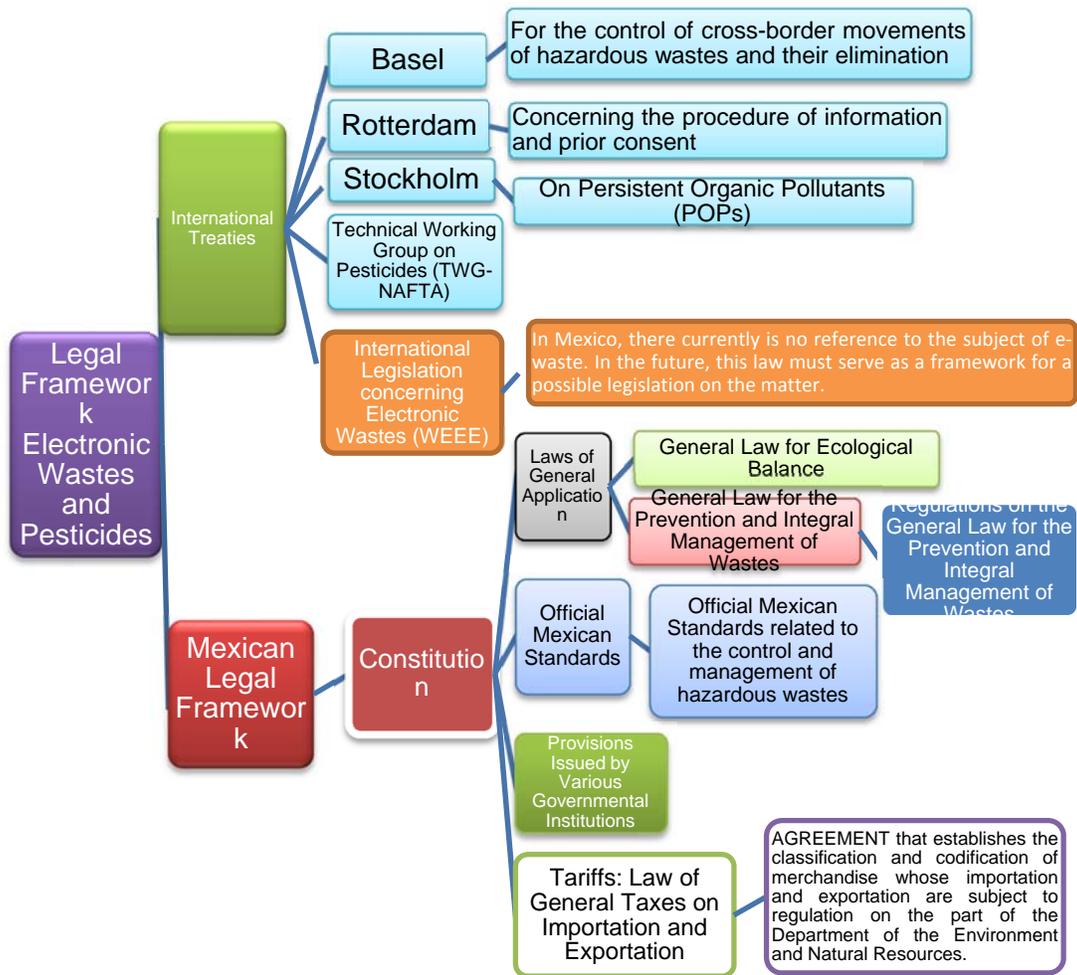
50. It is the competence of the Government, through SEMARNAT, to classify hazardous waste harmonized with international conventions, such as Basel and Stockholm Conventions, in the case they classify them as such according to the PBDEs concentration and to propose to Congress to reform LGPGIR and then States and Municipalities to adapt the normativity. The reform may consider some of the following options:

- Integrate electronic waste as hazardous waste, based on the concentration of hazardous chemicals like mercury, cadmium, lead, BFR, PCBs;
- Eliminate hazardous waste related definitions from the classification as “special management waste” and that SEMARNAT regulates them expressly through Regulations and Standards, as it is the function of SEMARNAT.

51. The absence of official figures regarding Management Plans for electronic wastes is recognized by the National Institute of Ecology and Climate Change and by The National Institute of Statistics and Geography (INEGI), which is a clear indicator to conclude that the classification model as “special management waste” the LGPGIR establishes for e-waste is inadequate to warranty the healthy environment to all inhabitants of Mexico, which therefore obligates it to an enhancement of public policies, planning system and regulations of the three different levels, federal, state and municipality.

52. The regulatory framework concerning electronic wastes and pesticides in Mexico is based on a fundamental statute, the Political Constitution of the United Mexican States, which establishes the general principles concerning the environment. (Articles 4 and 73, Sections X and XXIX-G of the Political Constitution of the United Mexican States). In this regard, the Constitution protects the right to an optimal environment for the sustainable development of all persons and the legislation of this matter falls upon the federal government. The regulations concerning electronic wastes and pesticides in Mexico are established in Figure 1 below. In particular, international treaties become the status of “National Laws” according to Mexican Constitution.

Figure 1: Regulations concerning Electronic Wastes and Pesticides in Mexico



53. With regard to electronic wastes and pesticides, it is necessary to indicate that the regulations that apply to them are the responsibility of the General Law for the Prevention and Integral Management of Wastes (LGPGIR), which establishes the framework for implementation as well as the distribution of authority which must be implemented in Mexico with respect to wastes. In general, this Law consists of the regulating principles that the different international treaties establish on the subject of hazardous wastes.

54. The objective of the LGPGIR is to guarantee the right of all people to a sound environment and to encourage sustainable development through preventing further production of wastes, evaluating them, and managing them (in their three categories) in an integral manner. For that purpose, it provides the powers to:

- Establish the coordinating mechanisms that correspond to the federal government, the Mexican states, and cities or towns as regards to the prevention of further generation of wastes, evaluation of said wastes, and managing them in an integral manner;
- Define the responsibilities of the producers, importers, exporters, dealers, consumers, and authorities at different levels of government as well as those who provide services in the integral management of wastes;
- Promote the due participation of all sectors of society in actions conducive to preventing further production of wastes, evaluating said wastes, and managing them in an integral manner that is environmentally sound as well as technological, economical, and socially viable;

- Regulate the importation and exportation of wastes;
- Formulate and conduct policy with respect to prevention, evaluation, and integral management of wastes;
- Establish the mechanisms to determine the liability and compensation for damages for those who generate wastes, based on the integral management of said wastes.

55. However, the essence of the statute has not been effective as there is a deficiency in the implementation of the provisions established in this Law, which generates a serious lack of observance of international regulations of which Mexico is a party and which obliges Mexico as a country to be compliant on the basis of the Constitution itself. Even if an obligation is established for the government to implement a National Program for the Prevention and Integral Management of Wastes, that which is currently in operation is from the period from 2007 to 2012. It is therefore necessary for Mexico to update this program in order to include the necessary measures that allow for the incorporation of the international guidelines regarding POPs with special reference to pesticides and electronic wastes into Mexico's legislation and governmental administration, and to introduce international experience and technology to address sound management of e-waste and pesticides.

2.5 Project Objective, Outcome and Outputs/Activities

56. The objective of the project is to minimize impacts on health and the global environment through sound chemicals management and reduction of POPs releases and exposure to POPs from e-waste and pesticides management operations in Mexico.

57. 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

58. This component will focus on strengthening regulations, public policies and institutional capacities that facilitate diminishing POPs release 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. It 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 programmes on pesticides. However, still more integration is required in the following:

- compliance of regulations, in particular related to the destruction/management of obsolete pesticide stocks;
- a sustainable and permanent system of inventory tracking of POPs, including contaminated sites.

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

The following activities will be carried out under this outcome:

Activity A1) Conduct legal review, gap analysis and economic instruments review 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 overall 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. Available economic instruments and potential new ones will be assessed, particularly where general principles of Extended Producer Responsibility and stewardship applicable to chemicals generally can be applied.

Activity A2) Prepare regulatory amendments, 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 the Stockholm and Basel Convention Classification (to classify in the National Law LGPGIR e-waste as hazardous waste) and economic instruments to help facilitate compliance will be adopted.

Activity A3) Conduct training on inspection for new POPs substances and products containing new POPs at state level. Compliance with regulatory 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.

Activity A4) Enhance the analytical and monitoring capacities and protocols of federal inspectors, Customs and chemical labs.

Activity A5) Institute sustainable capacity to support SC reporting and information exchange obligations, with particular emphasis on participating in 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

59. This project component will demonstrate best practices for e-waste management at State level in order to minimize POPs releases from this waste stream, considering BAT/BEP according to international standards. The demonstration will showcase both the public sector responsibilities as well as public-private sector interaction and finally ensure that good practices and applicable international knowledge and experience are adopted among final e-waste processing companies for state and interstate level replication.

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

60. The activities to be carried out under this outcome include:

Activity B1) Develop a proposal of legal amendments at State level for sound e-waste management and develop model state e-waste management plans, either if they are to be classified as “special management waste” or as hazardous waste.

Activity 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.

Activity B3) Develop a State and national level inventories of e-waste generation and Mass flow balance. A more precise and reliable 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. This activity certainly will go beyond what will be achieved in the NIP Update which will be estimates (which in previous experience is normally underestimated in the NIP process, sometimes up to an order of magnitude), since for the case of e-waste as an economic opportunity, this will be needed.

Activity B4) Develop state-level e-waste Management Plans. Pilot demonstration projects based on plans above will be developed, implemented and evaluated in three States, one in the north, Baja California (where a cluster of 212 enterprises exist. 15 are OEMs and nearly 200 specialized suppliers), bordering with the United States, one in Jalisco (important manufacturer centre of electronic goods) and one in Federal District (México City). These plans will encompass the complete life cycle from identification of e-waste sources through to end of life. The key part of these Plans is to foster efficient and effective collection and logistics and a sound management of e-waste. It will incorporate supervision by third parties.

Activity 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 programme 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, randomly disposing of them or directing them to unsound processing.

Activity 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 managing 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 undertake environmentally sound processing.

Activity 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.

Activity B8) Enhance 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

61. The activities to be carried out under this outcome are:

Activity C1) At least two demonstration pilot projects involving application of BAT/BEP in formal recycling facilities of different capacities will be developed, based on a screening assessment of candidate recycling plants, including demonstrating of how a good operation can work and development of a best practice guide. The processing stages which will be looked at for improvement, to be in line with international best practices, are crushing, grinding (in some cases), and air and water aided classification. Pyrometallurgical and hydrometallurgical processes will be assessed to determine if obtaining metal alloys can be commercially viable and environmentally soundly produced. It will explore ways to employ safe disposal practices to treat final waste from the recycling operations, in particular separating Brominated Flame Retardants (BFRs) for either their further use or proper disposal.

Activity C2) At least two demonstration pilot projects in informal recycling plants or clusters will be implemented, which will also be selected from different operations. The objective is to bring the chosen operations up to an environmentally sound operational and compliance level. The informal sector will be a key but difficult action in Mexico as well as in most other countries, and much efforts will be dedicated to address this issue. Strategy to convince the informal facilities to participate will be based on “confidence building” with them, by offering mainly free training workshops, information and technical support, and will be a key part of the outreach strategy that will take place from the beginning of the project.

Upon completion of the demonstration pilot projects to be carried out under Activity C1) and C2), PCDD/F emission will be reduced by about 42 g TEQ/year, which is about 15% of the estimated emission from e-waste in Mexico.

Activity C3) Develop a feasibility study and design of a pilot integrated recycling facility incorporating international best practices, with possible investment of a proponent private sector partner.

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

62. 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 obsolete pesticide stockpiles and waste as well as initiate work on POPs

pesticide contaminated sites in a systematic fashion. The first step is the update and development of relevant inventories, followed by environmentally sound destruction of stockpiles and waste, and assessment and containment/remediation of priority contaminated sites. Associated with this will be the 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

63. Activities to achieve this outcome include:

Activity D1) Prepare update of detailed inventory of remaining POPs pesticide stockpiles and associated waste and analytical estimates of POPs. 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.

Activity D2) Produce inventory, initial prioritization screening and risk assessment of POPs pesticide contaminated sites including training on site assessment for relevant government officials and service providers: In association with the confirmatory inventory of POPs stockpiles and wastes, identification, screening site and risk assessments of one or two sample sites 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.

Activity D3) Waste Management Plan from identification through to destruction of 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

64. Activities include:

Activity 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 elimination strategy will include the selection of destruction technologies that are proven to be most appropriate in accordance with the types and volume of pesticides identified. The estimated cost of destruction of POPs pesticides is about US\$2,500/ton and that includes all cost from collection through to destruction in national incineration facilities. In Mexico there exist capacities for their collection, storage, transport and destruction of the obsolete pesticide stockpiles. There are 2 incinerators, authorized for POPs pesticides processing, with total capacities of 3,000 ton/year, which are the facilities used for incineration of pesticides and other POPs. Final ashes of the incineration are disposed of in classified landfills. They fulfill the Mexican regulations of process and emissions. In the control of emissions, annual reports are presented to authorities. One of the incinerators is rotary and the other a stack process. So the proposed amount to be destroyed under this project is just only a fraction of the available annual capacity in the country. The activities that the project will implemented are first the identification and qualification of the dispersed pesticides. The principle result will be a shortlist of viable and likely competitive local 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 Activity E2).

Activity E2) Complete environmentally sound destruction of at least the 400 tons of confirmed inventory 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.

Activity E3) Conduct feasibility study of present processes for recycling of pesticide used containers, considering technological and economical aspects.

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

65. Activities to achieve this outcome are:

Activity F1) Design and develop detailed remediation plans on up to 3 priority POPs pesticide contaminated sites. Utilizing the result of Activity D2) above, three high priority sites will have detailed containment/remediation design work, inclusive of cost estimates established 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.

Activity F2) Develop “first phase” remediation plans for up to 10 POPs pesticide contaminated sites. Utilizing the results of Activity 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.

Activity F3) Enhance the national programme for ongoing management of POPs pesticide contaminated sites: Utilizing the information from the above, a national programme 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

66. This component will have the 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

67. Activities for this outcome are:

Activity 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 programmes 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 stewardship and Extended Producer Responsibility utilizing programmes operating in other NAFTA countries at the state and provincial level.

Activity G2) Develop outreach and training programmes on obsolete pesticide management for pesticide end-users and waste management and law enforcement government officers. This will cover training programmes 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.

Activity G3) Update national pesticide waste management guidelines, including reporting formats: The present guidelines will be reviewed utilizing the results of Activity G1) above and updated to fully reflect international practice and lessons learned.

Activity G4) Deliver reinforcement of State and municipal level obsolete pesticide and used containers collection programme. The present state level used pesticide container programmes will be reviewed

and changes implemented reflecting current experience with such programmes in other NAFTA countries as well as Latin American countries such as Brazil.

Activity G5) Develop a national replication programme 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 programme for promulgating an effective and sustainable system of obsolete pesticide management nationally.

Component 5. Project monitoring and evaluation

Outcome H) Monitoring, learning, adaptive feedback, outreach and evaluation

68. Activities for this outcome include:

Activity H1) Undertake continuous monitoring and periodic progress reviews, apply adaptive management to the project in response to needs and findings of the mid-term evaluation.

Activity H2) Conduct terminal evaluation and disseminate lessons learned and best practices at national level.

Component 6. Project Management

Outcome I) Strengthened project management capacities and efficiency

69. Activities for this outcome are:

Activity I1) Strengthen institutional capacity for project management; train staff on relevant GEF and UNDP requirements on project management.

Activity I2) Undertake day-to-day project management activities to ensure smooth and timely implementation of project activities including but not limited to: drafting TORs, select and contract with consultants, organize M&E activities, organize the review of substantial report. Facilitate sustainability of achieved project outcomes and objectives.

2.6 Baseline Project

70. The Baseline project is defined by the efforts of a number of stakeholders, external donors and the government's current and continuing programme funding which is assumed to be available in the absence of GEF funding. The 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.

71. Much of Activities 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. 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 supports the integration of these national efforts ensuring that Stockholm Convention chemicals and their releases are given due priority within the national SCM framework.

72. For Activities A2), A3) and A4) the baseline project could undertake organization of required training as well as undertake basic analysis instrument procurement. 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.

73. For Activity 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 Baja California, Jalisco and Federal District of Mexico City

74. The baseline project will cover most activities under Activities B1) to 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 (Activity B2) as well as e-waste exchange platforms (Activity B8). However, these components together with ensuring the quality State level e-waste disposal guidance require some external inputs 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

75. 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.

76. 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

77. In relation to Activities D1) and D2), 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.

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

79. In relation to Activity D3), 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

80. In the case of Activity 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 Activity 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 the form of grant funding with the result that a comprehensive elimination programme within the period of project implementation can be achieved. Regarding Activity 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 programme to address remaining sites.

81. 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 activities under this outcome.

Component 4. Obsolete pesticide management capacity strengthening

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

82. In the baseline project government agricultural extension service as well as private sector vendor will provide guidance to district level distributors 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 NAFTA countries to Mexico.

Component 5. Project monitoring and evaluation

Outcome H) Monitoring, learning, adaptive feedback, outreach and evaluation

83. This component would involve a fairly minimal effort in the baseline project except as required under local practice and procedures. The international M&E practices associated with GEF projects would not be included and the potentially important initiatives associated with national level dissemination of results, lessons learned and best practices would be absent in the baseline project.

Component 6. Project Management

Outcome I) Strengthened project management capacities and efficiency

84. The baseline project would essentially undertake basic and routine project management functions without an organized infrastructure and strengthened capacity to efficiently manage and monitor project activities.

2.7 Expected Results

85. The overall result of the project will be the minimization of negative impacts on health and the global

environment through sound chemicals management and reduction of POPs releases and exposure to POPs from e-waste and pesticides management operations in Mexico. Through implementation of project activities, 42 g TEQ of POPs releases of PCDD/Fs per year will be reduced with sound chemicals management of e-waste through introduction of applicable international best practice experience and technology options, and would reach 89 g TEQ/yr reduction through the subsequent implementation of the National Replication Programme after the completion of this project. Through inventory update on obsolete pesticide stockpiles and environmentally sound destruction, at least 400 tons of confirmed inventory of obsolete pesticide stockpiles will be eliminated. With the introduction of State Pilot level e-waste management plans, Provincial POPs pesticides Waste Management Plan, and the development of national replication programme, and the strengthening of national regulatory, legal framework and institutional capacities, sustainable on-going management of e-waste and POPs pesticides will be ensured.

2.8 Incremental and Additional Cost Reasoning and Global Environmental Benefits

86. 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.

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

88. 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 global environmental benefits 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.

89. 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.

90. Component 4 provides modest GEF support for improvement and upgrading of the long term programmes 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.

91. The project will provide substantial global environmental benefits, not the least of which is the elimination of up to 1,200 tons of obsolete pesticides including at least 400 tons 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 UPOPs through the environmentally sound management of e-waste that could reach 89 g TEQ/year of PCDD/Fs 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.

92. 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.

2.9 Socioeconomic Benefits

93. 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.

94. 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.

95. The overall socioeconomic benefit of the project is derived from the elimination of POPs releases from e-waste and the environmental destruction of POPs pesticide stockpiles that are having significant negative impacts on biological resources, inclusive of human health. The associated risk reduction at both a local and national level will positively impact the productivity of populations and reduce the financial burden imposed by potentially degraded public health, as well as contributing to general wellness, economic development and quality of life. This is particularly true for vulnerable parts of the population and for maternal health that would be improved by reduced POPs exposure.

96. More specific socioeconomic benefits from the project are associated with its proactive approach to integrating the informal sector into an environmentally sound chemicals management in e-waste processing. The informal sector generally involves low income sectors of the population who currently undertake the polluting informal processing of WEEE, essentially in their home environments with the significant health effects on all ages and genders in close proximity. The transition of collection, dismantling and primary processing activities to appropriately sited and equipped locations supported by collective environmentally sound infrastructure and operating with appropriate workplace standards will positively change this situation, as well as better assuring an equitable distribution of revenues for labour provided.

97. With the introduction of national and state level management plans in e-waste and obsolete pesticides, and the national replication programme, this will provide a mechanism to mitigate historical environmental and health aspects, to generate a sustainable socioeconomic benefit.

98. With the advance in development of new recycling plants, since they are in general labour intensive, the projection of the facilities that will be needed will generate 5,000 to 10,000 direct jobs, including all the product and waste chain.

99. The recycling and processing of 613,643 to 753,205 tons of e-waste will recover resources, and therefore produce economic benefits for the recycling facilities and subsequently the country in terms of increased tax revenue.

2.10 Risks and Mitigation Measures

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
Lack of cooperation of informal or formal e-waste processors	M	Information and training campaigns will be part of the outreach strategy to overcome this potential resistance
Technologically and economic related difficulties for PBDEs plastics segregation	L	In pilot projects, assessment will be made of this difficulties and solutions will be developed to overcome the difficulties, if possible
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

2.11 Sustainability and Replicability

100. The project components will become integral parts of an effective sound chemicals management scheme with institutional and financial long-term sustainability. Component 1 covers activities that will result in an effective regulatory and legal framework, an efficient infrastructure and strengthened capacity for sound chemicals management of e-waste and obsolete pesticides. Modification of the General Law for Prevention and Integral Management of Waste 2003 to incorporate e-waste as hazardous waste will bring effective enforcement and alignment with the Stockholm Convention (Outcome A2). This will allow permanent enforcement by the Federal Environmental Protection Attorney (PROFEPA) on e-waste sound management with the regulations' amendments prepared. Component 2 covers the development of the required management plans and the demonstration of BAT/BEP with the introduction of international technology and capacity at selected States, for both the formal and informal recycling facilities. This will strengthen structure and capacity to ensure infrastructure and technological sustainability, to reduce POPs sensitive releases and ensure efficient and environmentally sound chemical management. Significant co-financing committed to this component and the demonstrations will also contribute to successful technology demonstration and the long term sustainability of technological improvements, yielding significant

reduction in POPs emissions at formal and informal recycling facilities. Development and testing of e-waste management plans in 3 important States (Outcome B4) will mainstream even more the already high perception on the subject of e-waste management. Management Plans are already established as part of the General Law for Waste as an important tool for sound management of wastes, either as special management waste or hazardous waste. Pilot projects in formal and informal recycling operations (Outcomes C1 and C2) will help to reinforce the feasibility of the demonstrated processes as an economically viable alternative for POPs destruction. Special emphasis will be put in bringing the informal recycling operations to practice environmentally sound management of e-waste. Components 3 and 4 focus principally on an updated and accurate inventory of obsolete pesticide stockpiles, carrying out the environmentally sound elimination of significant quantities of obsolete POPs pesticide stockpiles (at least 400 tons of confirmed inventory) and addressing contaminated sites through containment/remediation activities. National and provincial level management plans will ensure sustainable ongoing and long-term management of obsolete pesticides. Components 5 and 6 will provide proper infrastructure and strengthened capacity for efficient project monitoring and management to achieve project objectives. The structure and capacity developed will ensure long-term sustainability.

101. The demonstration activities, with introduction of international experience, lessons learned and BAT/BEP technology at selected States will be appropriately replicable at many other formal recycling facilities. Replication can be first expanded to other processing facilities at the demonstration States, and subsequently nationally to other States throughout Mexico. The replication programme will ensure long-term sustainability of the project achievements.

2.12 Gender Considerations

102. 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.

103. Often, gender dimensions are considered to be ‘women affairs’, however UNDP considers “gender” to refer 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.

104. 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 recollectors 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.

105. 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. As e-waste contains persistent toxic chemical contaminants (such as heavy metals, dioxins, brominated flame retardants, etc.) which will be released into the environment through improper treatment process, serious threats are imposed to the ecological system and the human health at the dismantling sites. The recycling industry is related to severe health and safety risks for labours in this industry. The risks come from inadequate methods during the recovering procedures such as open burning of wires and the chemical treatment of circuit boards and electronic parts. The labours’ health is not protected since there are not precautionary measures adopted in the informal sector. Therefore occupational diseases related to skin, stomach, respiratory tract and other organs have been found. Many of the workers in dismantling and processing e-waste informally are women and thus women and children become the group most directly impacted by the health risk in the work place, as well as due to exposure in the contaminated sites where most of this group inhabited.

106. By addressing the POPs/PTS release in e-waste processing, health risks for workers, particularly the female works and their children will be reduced from exposure of POPs/PTS leading to ameliorated health situation for them. During implementation, the project will address the priority concerns of vulnerable groups including female workers and the poor to assess and strengthen capacity to reduce POPs/PTS release sensitive streams. The project will ensure female participation in the related activities of training and capacity building. In addition, there will be two overarching interventions – awareness raising and multi-stakeholder’s participation – that will contribute to ensuring the successful implementation of gender mainstreaming.

2.13 Triangular Cooperation

107. In the case of e-waste and obsolete pesticides, very little is known about the long term environmental consequences and health effects of POPs, and in the most cases, it’s generally the underprivileged populations that undergo the worst consequences. These risk groups are usually located generally in rural and peri urban excluded areas and generally living in poverty. This Project aims to reverse the situation of populations affected by e-waste and obsolete pesticides in these areas.

108. The Project will develop regulatory, legal and economic instruments that will be developed in Pilot States for further National Replication Programmes for sustainable pesticide management throughout the country. Thus, the envisioned institutional strengthening at State levels can be replicated. Produced knowledge and experiences possess high potential for South-South cooperation.

109. Initial contacts have been made with two potential countries (China and the United States) for possible cooperation and collaboration on sound e-waste management. China is currently implementing a GEF-fund e-waste project and will have much experience and knowledge to share with Mexico, while the United States share a long common border, and is actively involved and has close cooperation with Mexico on addressing e-waste.

2.14 Achievements of Project Preparation Grant (PPG)

110. A Project Preparation Grant (PPG) in the amount of US\$100,000 was approved by GEF in order to refine the project objectives, outcomes, and outputs as well as the work plan and budget on the project components of the PIF submitted. Building on the preliminary analysis on institutional and regulatory framework, initial analysis on POPs and emissions from e-waste and risk from exposure to obsolete POPs pesticides, the PPG was primarily to support national consultants and institutions to undertake assessment, surveys, evaluation, analysis and technical assistance necessary to confirm and improve the project baseline scenario mapping, refine the project approach and design, cost-effectiveness and the global environmental benefits of the project, to facilitate rapidly implement of the full-sized project (FSP).

111. To improve project baseline and to formulate refinement of the project approach and design, national consultants were recruited: Law and Policy Expert, Environmental Management Expert (e-waste) and Pesticides Specialist. Substantive reports were prepared, with findings and recommendations incorporated into the full project document. An International Environmental Specialist (for project document elaboration) was recruited with missions to Mexico to fully interact with national experts and governmental officials to refine the project document for submission to the GEF Secretariat for CEO endorsement.

112. Law and policy expert provided some additional key information to PIF elements that has been detailed in paragraphs 43 through 53 above, namely: modification of the Political Constitution of Mexico, (8 February, 2012), that states: “All people have the right to a healthy environment for their development and wellbeing. The State will warranty to respect this right. Damage and deterioration of the environment will generate liabilities for those who provoke it in terms of what is established by this Law.” In just this Article of Constitution the Project can be based so as to consider e-waste as hazardous by the National Government to establish that obligation so as to align with Basel and Stockholm Conventions for control and elimination of those hazardous wastes, including the full life cycle of the electronic device, which is related to its components, manufacture, commercialization, use and reuse. Article 4 obligates to update Mexican laws, Federal and States, through reforms that should change the criteria that limits responsibility

only to those who generate the waste and to build a Mexican model of extended responsibility, based on all stages and acts that provoke the environmental damage by specifically defining responsibilities of authorities and private and public producers, individually and collectively. And produced a proposal so as to which regulations can be modified.

113. Environmental Management Expert (e-waste) produced complementary information and updated what was presented in the PIF regarding mainly on inventory of e-waste generation, potential emissions and data about the recycling facilities. The original e-waste generation estimation of 150,000 and 250,000 tons of e-scrap generated in Mexico in 2006 was updated. The estimated e-waste generation was increased to 360.000 tons in 2010 (Instituto Nacional de Ecología, 2010). The amount of e-waste distribution in the 5 items was: TV sets (52% of total), desk and portable computers (39%), audio equipment (8%) and mobile telephones (1%). Other equipment (video, games, diaries, etc.) amounted to at least an additional 20%. However, in the PPG estimations, a total amount of e-waste generation nationally in 2013 has increased to between 613,643 to ~753,205 metric tons per year, which makes it possible to determine linearly the amount of e-waste generated per inhabitant at 5.9 kilograms per year. This estimation is based on some six different electronic goods: TV equipment (LCD, CRT, other), Computers (CPU, monitors and tablets), audio reproducers, mobile phones, entertainment devices and internet access devices

114. Pesticides specialist produced limited updated information about the status of the obsolete pesticides, since the work will have to be developed in much more detail during the implementation phase. The main outcome from the pesticides specialist was to interact with stakeholders in this waste stream as possible sources of cofinancing and to verify the official inventory of obsolete pesticides stockpiles as recorded.

3. PROJECT RESULTS AND RESOURCES FRAMEWORK:

This project will contribute to achieving the following Country Programme Outcome as defined in the CPD: CDP (2014-2018) “Promoted risk disaster and low-emission, resilient and environmentally sustainable development strategies, with a gender and multicultural approach for poverty reduction and equity.” (Those linked to the project and extracted from the country programme document)

Country Programme Outcome Indicators: Direct effect 6. Environmental sustainability and green economy. All three levels of government, the private sector, academia and civil society will have strengthened their capacities to reverse environmental deterioration, and to sustainably develop natural resources through mainstreaming environmental sustainability, low emissions development, and green economy in the legislative, programming and decision making processes

Primary applicable Key Environment and Sustainable Development Key Result Area: Area of Work 1: Sustainable development pathways. Scalable initiatives on sustainable productive capacities

Project Title and ID (ATLAS Award ID): Sound Management of POPs Containing Waste in Mexico

Applicable GEF Strategic Objective and Program: CHEM-1: Phase out POPs and reduce POPs releases

Applicable GEF Expected Outcomes: **Outcome 1.3** POPs releases to the environment reduced; **Outcome 1.4** POPs waste prevented, managed, and disposed of, and POPs contaminated sites managed in an environmentally sound manner

Applicable GEF Outcome Indicators: **Indicator 1.3.1** 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; **Indicator 1.4.2** Amount of obsolete pesticides, including POPs, disposed of in an environmentally sound manner; measured in tons

	Indicator	Baseline	End of Project Target	Source of Verification	Risks and Assumptions
Project Objective To minimize impacts on health and the global environment through sound chemicals management and reduction of POPs releases and exposure to POPs from e-waste and pesticides management operations in Mexico	National legal and regulatory framework reviewed, analyzed, amended to enhance enforcement and compliance with overall sound chemicals management, in particular, e-waste and pesticides management	Regulatory and legal framework not matching country’s obligations under international conventions Limited awareness on environmentally sound chemicals management	Regulatory and legal , economic instruments reviewed, analyzed, and amendment process initiated to reflect an overall Sound Chemicals Management framework and to align with Stockholm and Basel Conventions Relevant government officials, private sectors, end-users trained and awareness raised	Draft amended regulatory, legal and economic instruments Progress on regulatory and legal modification process Training programmes and materials Training reports Survey on awareness	<u>Risks:</u> <ul style="list-style-type: none"> - Amendment of regulatory and legal framework process may take long time for adoption - None or low cooperation from defined States - Electronic OEMs not interested - PROFEPA may not enforce control on POPs - Spread of POPs spread through increased climate change induced extreme weather <u>Assumption:</u> <ul style="list-style-type: none"> - Consultations emphasizing on development of regulative works at beginning of project implementation, with concrete proposals and close follow-up actions
	Grams TEQ of UPOPs emission reduced Development of State level e-waste management plans	Maximum potential generation of dioxins and furans with a range of 246.68 and 287.51 g TEQ./year	Demonstration pilot projects undertaken with application of BAT/BEP to improve e-waste collection and segregation mechanisms and	Progress report sand project completion reports	

	Indicator	Baseline	End of Project Target	Source of Verification	Risks and Assumptions
			dismantle and final disposal technologies 42 g TEQ/year POPs release minimized in formal and informal recycling of e-waste	Completion reports Technical reports from demonstrations	<ul style="list-style-type: none"> - Firm commitments through stakeholders consultations and co-financing commitments - Promote awareness on environment, human health and corporate social responsibilities. National distributors lagging commitment can possibly be supported and reinforced through interventions from international headquarters of OEMs - As results of gap analysis on regulatory and legal measures, concrete proposals and action plans will be developed to support and facilitate coordination and enforcement efforts of various authorities - Risk of exposure to POPs (pesticides) will be reduced by eliminating known existing stockpiles in the country. Management Plans developed will ensure proper warehousing condition until final disposal in environmentally sound manner
	Inventory (quantity and locations) of obsolete pesticides finalized Tons of obsolete pesticides destroyed (per compound) and mode of destruction (tons and costs/ton)	307.56 tons obsolete pesticides identified at last official update in March 2012, and could be up to 1,200 tons	Accurate and detailed inventory on obsolete pesticides stockpiles Environmentally sound destruction of at least 400 tons of confirmed inventory of obsolete pesticides, and may lead to the eventual elimination of 1,200 tons pending findings of an updated inventory to be conducted during project implementation	Updated inventory report Progress reports and destruction reports	
	Provincial Management Plans for obsolete pesticides established	None exists	Pesticide contaminated sites identified, and environmentally sound containment and remediation actions taken at priority contaminated sites Provincial Management Plans established, implemented and evaluated at three states: Chiapas, Sinaloa and Jalisco	Inventory of contaminated sites report 3 containment and remediation plans Management Plan documents	

Component 1: Strengthening institutional and public policies and capacities regarding POPs and sound chemicals management

<p>Outcome A): National legal and regulatory framework strengthened to enhance enforcement and compliance capacity for Stockholm Convention (SC) obligations within the country's overall sound chemicals management framework, in particular potential POPs</p>	<p>Expected Outputs:</p> <p>A1) Legal review, gap analysis and economic instruments reviewed in the context of the national sound chemicals policies and activities for potential POPs release from e-waste management and pesticides.</p> <p>A2) Regulatory amendments prepared.</p> <p>A3) Training on inspection for new POPs substances and products containing new POPs at state level conducted.</p> <p>A4) Analytical and monitoring capacities of federal inspectors, Customs and chemicals labs enhanced.</p> <p>A5) Sustainable capacity to support SC reporting and information exchange obligations in place.</p>				
	Strengthened regulatory and legislative framework	Not integrated with sound chemicals management framework	Regulatory and legal amendments in progress in the Mexican Law for Hazardous Waste and its	Amended legislative measures	<u>Risks:</u>

	Indicator	Baseline	End of Project Target	Source of Verification	Risks and Assumptions
release from e-waste management and pesticides			Regulations to align with international conventions, in particular, Stockholm and Basel Conventions	Progress of legislative process	<ul style="list-style-type: none"> - Regulatory and legal amendment takes long time for adoption - Lack of interest of PROFEPA and other officials to cooperate to enforce control of POPs <u>Assumption:</u> <ul style="list-style-type: none"> - Amended regulations and integration with an overall SCM framework will facilitate better coordination between authorities for management of pesticides and e-waste - Legal gap analysis will encourage action plan to be developed to support coordination and enforcement efforts of various authorities
	Training at State level on inspection of POPs substances and products containing new POPs	None implemented	200 Federal (PROFEPA and Customs officers) and state inspectors trained	Training materials and training reports	
	Analytical and monitoring capacities of federal inspectors, Customs and chemical labs enhanced	None implemented	100 federal inspectors, Customs officers and chemical laboratory personnel trained and capacity strengthened	Training materials and training reports	
	Sustainable capacity to support Stockholm Convention reporting and information exchange	Limited activities	Enhanced Stockholm Convention reporting and information exchange; participation in Global POPs Monitoring Network and Mexico taking leadership role in its regional network	Stockholm Conversion reports and information exchange. Meeting reports	

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

<p>Outcome B): Development and implementation of State pilot level e-waste management plan in three States: Baja California, Jalisco and Federal District of Mexico City and projection to entire country</p>	<p>Expected Outputs:</p> <p>B1) Proposal of legal amendments at State level for sound e-waste management and model state e-waste management plans developed.</p> <p>B2) Assessment of economic instruments documented and recommendations on fostering the sustainable financing of sound management of e-waste prepared, including development of WEEE stewardship levies and EPR mechanisms, supported by full lifecycle accounting and cost studies.</p> <p>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.</p> <p>B4) Management Plans developed for e-waste in state levels. Pilot demonstration projects based on these plans developed, implemented and evaluated in three States: one in North bordering with the United States (Baja California), Jalisco and Federal District of México City.</p> <p>B5) Outreach strategy designed and implemented including public awareness/ motivation for supporting capture of e-waste at source, and a cost effective collection chain.</p> <p>B6) E-waste training delivered and best practice sound management guidelines for municipalities and recycling enterprises as well as states governments developed and tested.</p> <p>B7) National characterization of recycling industry documented, and registration and certification system to ensure the adoption of environmentally sound e-waste management practices implemented.</p> <p>B8) Nationwide e-waste information exchange platform enhanced, linking waste streams and safe processors.</p>				
	Establishment of State level regulatory and legal framework	None	Model state e-waste management plans established	3 State level E-waste Management Plans established	<u>Risks:</u>

	Indicator	Baseline	End of Project Target	Source of Verification	Risks and Assumptions
	Development of WEEE stewardship levies and EPR to foster sustainable financing of sound management of e-waste	None	WEEE stewardship levies established and EPR mechanisms developed to foster sustainable financing	Lifecycle accounting and cost studies of WEEE levies and EPR establishment	<ul style="list-style-type: none"> - Low interest or cooperation from defined state government - Electronic OEMs not interested - Difficulty in identifying informal recycling facilities and no interest in participation - Low interest in e-waste management by recycling enterprises and general public <p><u>Assumption:</u></p> <ul style="list-style-type: none"> - Extensive consultations during PPG stage solidified interest and secured co-financing commitments ensures active participation - Informal recyclers may be enticed by improved technologies that will produce better yield and high profit - Public awareness and outreach programme will bring attention and promote awareness among general public, recycling enterprises, and government officials - Better collection mechanism and improved dismantling and processing technologies will attract formal recyclers due to improved yields and higher profits - National inventory and established registration and certification system will required recycling enterprises to practice environmentally sound management of e-waste
	State and national inventory on e-waste generation and mass flow balance	Outdated or inadequate data	Inventories with better determination of e-waste generated and POPs release better estimated	Updated State and national e-waste inventories	
	Development and implementation of State level Management Plans	Limited	Management Plans on lifecycle management (LCM) developed, implemented and evaluated in three States (north bordering United States, Jalisco and Federal District)	State level Management Plans Implementation results	
	Development and implementation of outreach strategy	None	Outreach and communication programme for general public and state level government developed, implemented and results evaluated 15 times events organized and 300 participants	Outreach and communication strategy evaluation report Public awareness materials and events reports Public awareness perception/motivation assessment	
	Training strategy on e-waste management guides developed Number of training workshop conducted	No active activities	Training strategy for public, recycling enterprises and state governments developed, implemented and results evaluated 500 participated in the training 2 guidelines produced	Training materials Training reports	
	Characterization study of nationwide recycling industry to establish a registration and certification system	None	Inventory of formal and estimation of informal recycling facilities Registration and certification system established for e-waste recycling industry, with 20 of the facilities certified. Increase in the number of registered facilities	Inventory list of formal recycling enterprises and estimation of informal facilities List of registered and certified/qualified recyclers	

	Indicator	Baseline	End of Project Target	Source of Verification	Risks and Assumptions
	Establishment of nationwide e-waste information exchange platform	None	Nationwide information exchange platform established linking waste streams and safe processors	Platform webpage	
Outcome C): Demonstration of POPs release minimization in formal recycling and informal recycling of e-waste	Expected Outputs: C1) At least two demonstration pilot projects involving application of BAT/BEP in formal recycling facilities developed and implemented with emphasis on separating BFR from e-waste streams. C2) At least two demonstration pilot projects in informal recycling plants or clusters developed and implemented to bring operation up to an environmentally sound operational and compliance level. C3) Feasibility study and design of a pilot facility undertaken, with possible investment of a proponent private sector partner.				
	Number of demonstration pilot projects with introduction of BAT/BEP in formal recycling facilities	None	At least 2 pilot interventions implemented, introducing BAT/BEP on collection, segregation, dismantling and final disposal	Contracts for pilot implementation	<u>Risks:</u> <ul style="list-style-type: none"> - Low interest of participation of formal recycling facilities - Difficulties in identifying and securing participation of informal recyclers - Mechanisms and technologies inappropriate for recycling facilities to adopt - Informal recyclers unwilling to adopt sound management of e-waste due cost issues <u>Assumption:</u> <ul style="list-style-type: none"> - Improved mechanisms and technologies in e-waste collection, segregation, dismantling and final disposal more cost-effective that reduce costs and generate higher yield and profit - Promoting awareness among informal recyclers will entice them to participate that will produce better yield and higher profit - International BAT/BEP already tested yielding positive management and technological improvement
	Number of demonstration pilot projects in informal recycling plants to bring operation up to environmentally sound operational and compliance level	None	At least 2 pilot interventions implemented with improved collection and segregation mechanism, and practice of environmentally sound management of e-waste	Contracts for pilot implementation	
	Feasibility study and design of integrated recycling facility	None	Feasibility study finalized with project design, identifying financing estimates and options with a private sector proponent	Feasibility study report	
Component 3: Reducing risks through elimination of POPs pesticides stockpiles and wastes					
	Expected Outputs:				

	Indicator	Baseline	End of Project Target	Source of Verification	Risks and Assumptions
Outcome D): Provincial POPs pesticides Waste Management Plan establishment and tested in selected provinces	D1) Update 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.				
	Availability of inventory of remaining POPs pesticide stockpiles and associated waste	Inventory outdated and complete	Detailed inventory updated, prioritization screening conducted and risk assessment of POPs pesticide contaminated sites produced	Obsolete POPs pesticide and waste inventory Risk assessment reports	<u>Risks:</u> - Process of updating inventory ineffective or incomplete <u>Assumption:</u> - Consolidation of information available from principle historical holders of POPs and general obsolete pesticide inventories as well as establishing secure care, custody and financial/liability arrangements particularly considering historical state involvement and current private sector role
	Availability of Waste Management Plans at 3 States (Chiapas, Sinaloa, Jalisco)	Not available at all States	3 Waste Management Plans from identification through destruction of POPs pesticides designed and tested at state pilot scale	State Waste Management Plans Implementation reports	
Outcome E): Substantial elimination of remaining POPs pesticide stockpiles and POPs wastes in Mexico	Expected Outputs: E1) Qualification of cost effective commercial options for the environmentally sound destruction of POPs pesticide stockpiles and wastes consistent with international standards. E2) Environmentally sound destruction of at least 400 tons and up to 1,000 tons of POPs pesticide stockpiles and waste. E3) Technology of recycling processes for used pesticide containers assessed.				
	Effective commercial options for environmentally sound destruction of POPs pesticide stockpiles and wastes	None	Available domestic and export market commercial destruction options assessed	Shortlist of viable and likely competitive commercial options	<u>Risks:</u> - Limited or unqualified commercial options - Technically inefficient or not cost-effective destruction options <u>Assumption:</u> - Availability of viable and likely competitive commercial options
	Amount of POPs pesticide stockpiles and waste destroyed	400 tons of confirmed inventory of pesticide stockpiles	Elimination of 400 tons of confirmed inventory of POPs pesticide stockpiles and wastes, and may lead to the eventual elimination of 1,200 tons pending findings of an updated inventory to be conducted during project implementation	Progress and completion reports	
	Feasibility study for recycling of used pesticide containers	None	Technological and economical aspects of recycling used pesticide containers studied. Action plan designed and costs estimated	Experts reports	

	Indicator	Baseline	End of Project Target	Source of Verification	Risks and Assumptions
Outcome F): Containment / remediation of priority POPs pesticide contaminated sites and national programme to address remaining sites	Expected Outputs: F1) Detailed remediation plans on up to 3 priority POPs pesticide contaminated sites designed and developed. F2) First phase remediation plans for up to 10 POPs pesticide contaminated sites developed. F3) A national programme for ongoing management of POPs pesticide contaminated sites enhanced.				
	Number of remediation plans for high priority POPs contaminated sites	None	3 Detailed remediation plans designed inclusive of costs estimates	Remediation plans; contracts for plan implementation; completion reports	<u>Risks:</u> <ul style="list-style-type: none"> - Inventory updating and identification of contaminated sites incomplete - Inadequate financial resources to implement containment and remediation activities at identified contaminated sites - Limited financial and human resources to implement national programme <u>Assumption:</u> <ul style="list-style-type: none"> - Risk assessment study to proactively identify and mitigate financial and human resources needs
	Number of first phase remediation plans for POPs pesticides contaminated sites	None	10 Preliminary containment and remediation plans generated; implementation arrangements including identification of clean up financing identified	Preliminary containment and remediation plans; and associated implementation and financing plans	
	Availability of national programme for on-going management of POPs pesticide contaminated sites	None	National programme addressing contaminated sites in general with specific emphasis on POPs contaminated sites	Programme document	
Component 4: Obsolete pesticide management capacity strengthening					
Outcome G): Institutional strengthening at provincial level for obsolete pesticides management delivered	Expected Outputs: G1) Assessment of national institutional capacities for establishment of obsolete pesticide management plans at state level undertaken G2) Outreach and training programmes on obsolete pesticide management for pesticide end-users, waste management service providers, and law enforcement government officers. G3) National pesticide waste management guidelines, including reporting formats, updated. G4) State and municipal level obsolete pesticide and used containers collection programme reinforcement delivered. G5) National replication programme for sustainable obsolete pesticide management developed.				
	Availability of an assessment covering national institutional capacities for implementation of state level obsolete pesticides management plan	State and national level programme not matching obligations of international conventions	National capacity assessed, gap analysis conducted, priorities and action plans identified, public-private partnership initiated	Assessment reports and action plans	<u>Risks:</u> <ul style="list-style-type: none"> - Lack of interest of state level authorities to buy in - Inefficient and ineffective inspection and enforcement efforts <u>Assumption:</u>
	Outreach and training programmes developed	None	100 Pesticide end-users, waste management and low enforcement governmental officials trained	Programme materials and training reports	

	Indicator	Baseline	End of Project Target	Source of Verification	Risks and Assumptions
	Availability of national pesticides waste management guidelines	Present guidelines not matching obligations of international conventions	1 Guidelines updated to fully reflect international practices and lessons learned	Guidelines document	<ul style="list-style-type: none"> - Extensive stakeholders consultations during PPG stage and project implementation - Trainings conducted to strengthen capacities will ensure sustainable ongoing programmes
	Reinforcement of State and municipal level obsolete pesticide and used containers collection programme delivered	Outdated State level used pesticide containers programmes	Changes implemented to reflect current experiences of other NAFTA and other Latin American countries	State level used pesticide container programmes	
	National replication programme for sustainable pesticide management	None	National replication programmes for sustainable obsolete pesticide management developed	Replication programme	

Component 5: Monitoring and evaluation

Outcome H): Monitoring, learning, adaptive feedback, outreach, and evaluation	Expected Outputs: H1) M&E and adaptive management applied to project in response to needs, mid-term evaluation findings with lessons learned extracted. H2) Lessons learned and best practices are disseminated at national level.				
	Timing and quality of annual (APRs, PIRs etc.) and M&E reports Quality appraisal in Mid-Term Review and Terminal Evaluation	Indicative M&E plan, budget and timeframe	M&E activities implemented as scheduled and project implementation monitored to achieve project objectives	Various M&E and substantial reports Mid-Term Review and Terminal Evaluation reports	<u>Risks:</u> <ul style="list-style-type: none"> - Failure to exercise timely and effective M&E activities and adaptive management due to capacity issue
	Lessons learnt and experience documented and disseminated; post-project action plan formulated	None	Lessons and experience documented and disseminated	Knowledge products (publications, printed, audio-visual and promotional materials); post-project action plan	<u>Assumptions:</u> <ul style="list-style-type: none"> - Efficient M&E to facilitate achievement of outcomes and project objectives

Component 6: Project Management

Output I): Strengthened project management capacities and efficiency	Expected Outputs: I1) Institutional capacity strengthened for project management I2) Project smoothly implemented and all results specified achieved and sustainable				
	Institutional established and capacities strengthened to achieve timely project implementation and disbursement	Limited existing staff	National project team established, staffed, equipped. National project team trained and capacities strengthened	Project APRs, PIRs, CDRs	<u>Risks:</u> <ul style="list-style-type: none"> - Inadequate capacity and insufficient coordination will impact project implementation

	Indicator	Baseline	End of Project Target	Source of Verification	Risks and Assumptions
	Training needs identified; project personnel trained on relevant requirements of GEF and UNDP on project management	None	Staff trained and project management capacity strengthened	Training reports	<u>Assumptions:</u> - Efficient project management will lead to timely achievement of outcomes and project objectives
	Routine project management activities undertaken to ensure the smooth and timely implementation of the project. The activities include but not limited to: drafting TORs, select and contract with consultants, organize M&E activities, organize the review of substantial report	None	Efficient and effective project management leading to achievement of project objectives and sustainability ensured	Progress and annual reports, mission reports and achieved outcomes National replication programme	

4. TOTAL BUDGET AND WORKPLAN

4.1 Detailed Breakdown of GEF and Co-Financing Budget and Work Plan

Part 1: Total Project Workplan and Budget under GEF Financing

Award ID:	00084933		Project ID:	00092730		Business Unit:	MEX10						
Project Title	Sound Management of POPs Containing Waste in Mexico												
Executing Agency	Ministry of Environment and Natural Resources (Secretaria de Medio Ambiente y Recursos Naturales, SEMARNAT)												
Planned Budget													
GEF Outcome / Atlas Activity*	Implementing Agent/Resp. Party	Source of Funds	Atlas Code	Atlas Budget Description	Amount (USD) 2015	Amount (USD) 2016	Amount (USD) 2017	Amount (USD) 2018	Amount (USD) 2019	Amount (USD) 2020	Total (USD)	Budget Notes	
Component 1: Strengthening institutional and public policies and capacities regarding POPs and sound chemicals management	SEMARNAT	62000 GEF	71200	International Consultants									
			71300	Local Consultants	2,000	4,500	4,500	4,500	4,500	1,000	21,000	A	
			71400	Contractual Services – individuals									
			71600	Travel	4,000	5,000	3,000	3,000				15,000	B
			72100	Contractual Services – companies	54,000	41,000	20,000	20,000	3,000	2,000		140,000	C
			72200	Equipment and Furniture									
			74200	Audio Visual & Print Prod Costs									
			74500	Miscellaneous									
			75700	Training, workshop, and conference			9,000	9,000	6,000				24,000
				Sub-total	60,000	59,500	36,500	33,500	7,500	3,000	200,000		
Component 2: Reduction of POPs releases from e-waste processing at State and waste processor levels	SEMARNAT	62000 GEF	71200	International Consultants		7,500	7,500	7,500			22,500	E	
			71300	Local Consultants	30,000	220,000	224,250	143,000	12,500		629,750	F	
			71400	Contractual Services – individuals									
			71600	Travel	19,200	27,000	33,000	20,800	15,000			115,000	G
			72100	Contractual Services – companies	57,000	741,500	794,750	529,500	154,000			2,276,750	H
			72200	Equipment and Furniture									
			74200	Audio Visual & Print Prod Costs									
			74500	Miscellaneous									
			75700	Training, workshop, and conference	3,000	61,500	67,500	53,000	21,000			206,000	I
				Sub-total	109,200	1,057,500	1,127,000	753,800	202,500	-	3,250,000		

GEF Outcome / Atlas Activity*	Implementing Agent/Resp. Party	Source of Funds	Atlas Code	Atlas Budget Description	Amount (USD) 2015	Amount (USD) 2016	Amount (USD) 2017	Amount (USD) 2018	Amount (USD) 2019	Amount (USD) 2020	Total (USD)	Budget Notes	
Component 3: Reducing risks through elimination of POPs pesticides stockpiles and wastes	SEMARNAT	62000 GEF	71200	International Consultants									
			71300	Local Consultants		45,500	89,000	58,500	35,000		228,000	J	
			71400	Contractual Services – individuals									
			71600	Travel				7,200	13,000	4,800		25,000	K
			72100	Contractual Services – companies	83,000	358,000	322,000	222,800	197,200		1,183,000	L	
			72200	Equipment and Furniture									
			74200	Audio Visual & Print Prod Costs									
			74500	Miscellaneous									
			75700	Training, workshop, and conference	9,000	18,000	12,000	15,000	10,000		64,000	M	
				Sub-total	92,000	421,500	423,000	303,500	255,200	4,800	1,500,000		
Component 4: Obsolete pesticide management capacity strengthening	SEMARNAT	62000 GEF	71200	International Consultants									
			71300	Local Consultants	12,500	33,500	33,500	33,250	10,250		123,000	N	
			71400	Contractual Services – individuals									
			71600	Travel									
			72100	Contractual Services – companies		20,000	34,000	33,000	33,000		120,000	O	
			72200	Equipment and Furniture									
			74200	Audio Visual & Print Prod Costs									
			74500	Miscellaneous									
			75700	Training, workshop, and conference		23,500	30,500	29,500	23,500		107,000	P	
				Sub-total	12,500	77,000	98,000	95,750	66,750	-	350,000		
Component 5: Monitoring and evaluation	SEMARNAT	62000 GEF	71200	International Consultants			16,500			16,500	33,000	Q	
			71300	Local Consultants	15,000	7,500	21,250	7,500	10,500	10,750	72,500	R	
			71400	Contractual Services – individuals									
			71600	Travel	2,000	2,000	9,250	2,000	2,000	7,250	24,500	S	
			72100	Contractual Services – companies									
			72200	Equipment and Furniture									
			74200	Audio Visual & Print Prod Costs						2,000	2,000	T	
			74500	Miscellaneous									

GEF Outcome / Atlas Activity*	Implementing Agent/Resp. Party	Source of Funds	Atlas Code	Atlas Budget Description	Amount (USD) 2015	Amount (USD) 2016	Amount (USD) 2017	Amount (USD) 2018	Amount (USD) 2019	Amount (USD) 2020	Total (USD)	Budget Notes	
			75700	Training, workshop, and conference	10,000					8,000	18,000	U	
				Sub-total	27,000	9,500	47,000	9,500	12,500	44,500	150,000		
Component 6: Programme management	SEMARNAT	62000 GEF	71200	International Consultants									
			71300	Local Consultants	38,750	45,000	45,000	45,000	45,000	11,250	230,000	V	
			71400	Contractual Services – individuals									
			71600	Travel	800	1,000	1,000	1,000	1,000	200	5,000	W	
			72100	Contractual Services – companies									
			72200	Equipment and Furniture	5,000							5,000	X
			72500	Supplies	500	500	500	500	500		2,500	Y	
			74200	Audio Visual & Print Prod Costs									
			74500	Miscellaneous	500	500	500	500	500		2,500	Z	
			75700	Training, workshop, and conference	1,000	1,000	1,000	1,000	1,000		5,000	AA	
	UNDP		74599	UNDP cost recovery chrgs-Bills	3,000	4,000	4,000	4,000	4,000	1,000	20,000	AB	
				Sub-total	49,550	52,000	52,000	52,000	52,000	12,450	270,000		
				Total GEF Allocation	350,250	1,677,000	1,783,500	1,248,050	596,450	64,750	5,720,000		

Budget Notes

Budget Notes:		
No.	Budget Line	Component 1 – Strengthening institutional and public policies and capacities regarding POPs and sound chemicals management
A	71300	National consultants engaged to conduct training on inspection for new POPs substances and products containing new POPs at state level (Activity A3) at \$250/day for a total of 84 workdays
B	71600	Travel costs for federal inspectors, Customs officials and chemical laboratory personnel to participate in training activities (A3)
C	72100	Contractual services to (A1) conduct legal review, gap analysis and economic instruments review (\$30,000); (A2) prepare regulatory amendments (\$42,000); (A4) enhancing analytical and monitoring capacities (\$51,000); and (A5) enhancing institutional sustainable capacities to support Stockholm Convention reporting (\$17,000)
D	75700	Training workshops, seminars and meetings conducted for Activities A2, A3, A4 and A5
Component 2 – Reduction of POPs releases from e-waste processing at State and waste processors levels		
E	71200	International consultants to provide technical assistance on application of BAT/BEP at demonstration pilot projects(C1), for a total of 30 workdays at \$750/day
F	71300	National consultants to (B1) develop proposal for legal amendments (\$50,000), (BB2) assess economic instruments and prepare a proposal (\$41,000); (B3) develop a State and national inventory of e-waste generation (\$150,000); (B4) develop state-level e-waste Management Plans (\$100,000); (B5) design and

		establish an outreach strategy (\$50,000); (C1) provide technical support to demonstration pilot projects involving application of BAT/BEP in formal recycling facilities (\$138,750); (C2) provide technical support to demonstration pilot projects in informal recycling plants or clusters (\$100,000). National consultants recruited will be for a total of 1,449 workdays at \$250/day and 535 workdays at \$500/day.
G	71600	Travel costs for international and national consultants to provide technical assistance
H	72100	Contractual services to (B3) develop a State and national level of e-waste generation and mass flow balance (\$221,000); (B4) develop state-level ep-waste Management Plans (\$13,000); (B5) design and establish an outreach strategy (\$104,000); (B6) design, implement and evaluate training strategy for public and recycling enterprises (\$65,000); (B7) characterize nationwide recycling industry (\$171,000); (B8) enhance nationwide e-waste information exchange platform (\$44,000); (C1) provide technical support to demonstration pilot projects involving application of BAT/BEP in formal recycling facilities (\$1,055,750); (C2) provide technical support to demonstration pilot projects in informal recycling plants or clusters (\$403,000); (C3) develop a feasibility study and design of pilot integrated recycling facility in partnership with a private sector proponent (\$200,000)
I	75700	Training workshops, seminars and meetings conducted for Activities B2, B3, B4, B5, B6, B7, B8, C1, C2
Component 3 – Reducing risks through elimination of POPs pesticides stockpiles and wastes		
J	71300	National consultants to (D3) design Waste Management Plan from identification through destruction of pesticides (\$50,000); (E2) technical support on environmentally sound destruction of POPs pesticides stockpiles and wastes (\$50,000); (F1) design and develop detailed remediation plans on up to 3 priority POPs pesticides contaminated sites (\$50,000); (F2) design first phase remediation plans for up to 10 POPs pesticide contaminated sites (\$47,000); and (F3) enhance national programme for ongoing management of POPs pesticides contaminated sites (\$31,000). National consultants recruited will be for a total of 588 workdays at \$250/day and 162 workdays at \$500/day.
K	71600	Travel costs for technical support and monitoring
L	72100	Contractual services to (D1) prepare update of detailed inventory of remaining POPs pesticide stockpiles and associated wastes and analytical estimates of POPs (\$82,000); (D2) produce inventory, initial prioritization screening and risk assessment of POPs pesticide contaminated sites (\$50,000); (D3) design Waste Management Plan from identification through destruction of pesticides (\$86,000); (E1) assess qualification of cost effective commercial options for environmentally sound destruction of POPs pesticide stockpiles and wastes (\$50,000); (E2) undertake environmentally sound destruction of POPs pesticides stockpiles and wastes (\$765,000); (E3) develop feasibility study of present processes for recycling of pesticide used containers (\$150,000).
M	75700	Training workshops, seminars and meetings for Activities D1, D3, E2, F2, F3
Component 4 - Obsolete pesticide management capacity strengthening		
N	71300	National consultants to (G1) undertake assessment of national institutional capacities for establishment of state-level obsolete pesticide management plans (\$32,000); (G2) develop outreach and training programmes on obsolete pesticide management for pesticide end-users and government officers (\$41,000); (G3) update national pesticide waste management guidelines (\$50,000). National consultants recruited will be for a total of 492 workdays at \$250/day.
O	72100	Contractual services to (G4) deliver reinforcement of State and municipal level obsolete pesticide and used containers collection programme (\$80,000); (G5) develop a national replication programme for sustainable obsolete pesticide management (\$40,000)
P	75700	Training workshops, seminars and meetings for Activities G1, G2, G4, G5
Component 5 – Monitoring and Evaluation		
Q	71200	International consultants to undertake (H1) mid-term and (H2) final evaluation for a total of 50 workdays at \$660/day
R	71300	National consultants to a) undertake measurement of baseline indicators and means of verification of project results (\$22,500); b) undertake measurement of means of verification of project progress and outputs (\$22,500); c) conduct mid-term and final evaluations (\$12,500); d) annual audit (\$15,000). National consultants recruited will be: 110 workdays at \$250/day and 90 workdays at \$500/day
S	71600	Travel costs to cover a) participants to Technical Advisory Committee meetings (\$5,000); b) mid-term and final evaluation (\$14,500); and field visits by project personnel (\$5,000)
T	74200	Printing and audio-visual costs for lessons learned dissemination
U	75700	Inception workshop (\$10,000) and workshop for dissemination of experience gained and lessons learned (\$8,000)
Component 6 – Programme Management		
V	71300	National consultants and project staff to undertake day-to-day project implementation and management activities for a total of 920 workdays at \$250/day
W	71600	Travel costs in connection with project management responsibilities
X	72200	Standard office and computing equipment

Y	72500	Basic office supplies for duration of project period
Z	74500	Miscellaneous charges for the duration of project period
AA	75700	Training workshops, seminars and meetings to strengthen project management capabilities
AB	74599	Costs for UNDP Country Office to provide direct support services

Summary by Atlas category

Atlas Budgetary Account Code	ERP/ATLAS Budget Description/ Input	2015 (US\$)	2016 (US\$)	2017 (US\$)	2018 (US\$)	2019 (US\$)	2020 (US\$)	Total (US\$)
71200	International consultants	-	7,500	24,000	7,500	-	16,500	55,500
71300	Local consultants	98,250	356,000	417,500	291,750	117,750	23,000	1,304,250
71600	Travel	26,000	35,000	46,250	34,000	31,000	12,250	184,500
72100	Contractual Services- Companies	194,000	1,160,500	1,170,750	805,300	387,200	2,000	3,719,750
72300	Equipment	5,000	-	-	-	-	-	5,000
72500	Supplies	500	500	500	500	500	-	2,500
74200	Audio Visual & Print Prod Costs	-	-	-	-	-	2,000	2,000
74500	Miscellaneous	500	500	500	500	500	-	2,500
74599	Direct Project Costs	3,000	4,000	4,000	4,000	4,000	1,000	20,000
75700	Training, workshop, and conferences	23,000	113,000	120,000	104,500	55,500	8,000	424,000
Total		350,250	1,677,000	1,783,500	1,248,050	596,450	64,750	5,720,000

Confirmed Project Co-financing

Sources of Co-financing	Type of Co-financing	Amount (US\$)
Project National Government Contribution (SEMARNAT, SAGARPA)	In-kind	10,200,000
Project Local Government Contribution (States of Baja California, DF Mexico City, Jalisco)	In-kind	2,083,750
Private Sector (AMOCALI, UNFAAC, OEMs, large importers, distributors, enterprises, service enterprises, recyclers, metallurgical enterprises)	Investment	7,300,000
<i>To be confirmed during implementation</i>	Investment	3,461,250
Other Multilateral Agencies (UNDP)	In-kind	55,000
Total co-financing		23,100,000

115. Consumption of electronics goods was over US\$84 billion in Mexico in 2011. If it is conservatively considered that costs of recycling the discarded goods (e-waste) is 2% of its value, it represents US\$1,680 million and the generation of at least 5,000 jobs. Confirmed co-financing in this Project is US\$23.1 million, of which \$13.75 million is targeted for addressing e-waste which represents about only 0.8% of the recycling expenses. It is well known that the key factor for effective post-consumption recycling is a system of efficient and effective collection of dispersed goods, in this case in an area of 2 million square kilometers. That is why the main focus of the project (and as part of that, the role of national consultants in the project) is directed to establish management plans for that purpose, besides improving the existing processing technologies. GEF grant will focus on providing international and national technical support to introduce international experience and knowledge, and the application of BAT/BEP at the demonstration pilot projects. Subcontracting arrangements will provide turn-key activities in the demonstration pilot projects for process improvements including process control equipment, environmental protection devices, parts, and safety/ventilation

requirements. For completing the environmentally sound destruction of substantial quantity of obsolete POPs pesticides, the project will take advantage of experience gained in implementing the PCB project in achieving costs savings, in particular with utilization of local expertise and domestic facilities to undertake sound destruction.

116. The project was able to generate substantial co-financing, large part of which will be investment by private sector enterprises. The co-financing by private sector will consist mainly in the establishment of infrastructure for recycling, through their investment in existing or new recycling facilities. This can come from OEMs, from already existing recycling enterprises or from creation of new installations by existing metallurgical enterprises. A total co-financing of \$7,870,000 is allocated for required equipment, process adaptation and plant modification, including safety and ventilation system at the demonstration enterprises under Activity C1) and C2), \$2,580,000 cofinancing will be contribution by private sector partner for equipment and infrastructure need to establish a pilot integrated recycling facility under Activity C3). For the environmentally sound destruction of obsolete POPs pesticides under Activity E2), a \$2,830,000 co-financing by the owners will pay part of the destruction costs.

117. In Mexico, the generation of e-waste is estimated between 600,000 to 700,000 ton/year, while officially government authorized (and installed) capacity of the 25 recycling facilities has only a total capacity of about 15,000 ton/year, accounting for less than 2.5% of the capacity required by the country. Therefore to reach the project goal of 15% reduction of emissions through unsound treatment will require creating at least 5 times the existing capacity, in order to be able to process 90,000 to 100,000 tons of e-waste. By further considering that a 10,000 ton/yr capacity e-waste processing plant may cost US\$5 million, a total investment (as potential co-financing) of US\$ 45 million will be required. This is over a 100% of the total \$23.1 million co-financing confirmed in this project to address both the e-waste and POPs pesticide stockpiles. It is anticipated that the co-financing generated in this project will serve as a strong catalytic effect to attract interest and future investment in establishing more e-waste processing facilities, especially taking into account the strong evidence of achievements through applying international best practices, in both technology and management areas, that will be generated through the demonstration pilot projects at both the formal and informal recycling facilities.

Part 2: Total Project Workplan, Implementation Timeline and Budget Reflecting GEF Resources and Co-Financing Based on Activities

Project Activities	Description of Activities	Yr 1	Yr2	Yr 3	Yr 4	Yr 5	Total	GEF	Co-financing
Component 1: Strengthening institutional and public policies and capacities regarding POPs and sound chemicals Management									
Activity A1	Conduct legal review, gap analysis and economic instruments review in the context of the national sound chemicals management policies and activities						150,000	30,000	120,000
Activity A2	Prepare regulatory amendments, including enabling of relevant economic instruments applicable to sound chemicals management						250,000	50,000	200,000
Activity A3	Conduct training on inspection for new POPs substances and products containing new POPs at state level.						150,000	30,000	120,000
Activity A4	Enhance the analytical and monitoring capacities and protocols of federal inspectors and Customs and chemical labs						350,000	70,000	280,000
Activity A5	Institute sustainable capacity to support SC reporting and information exchange obligations, with particular emphasis on participating with the Global POPs Monitoring Network and taking a leadership role in its regional network.						100,000	20,000	80,000
	Sub-total Component 1						1,000,000	200,000	800,000
Component 2: Reduction of POPs releases from e-waste processing at State and waste processor levels									
Activity B1	Develop a proposal of legal amendments at State level for sound e-waste management and develop model state e-waste management plans						260,000	50,000	210,000
Activity 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						160,000	50,000	110,000
Activity B3	Develop a State and national level inventories of e-waste generation and Mass flow balance						880,000	400,000	480,000
Activity B4	Develop state-level e-waste Management Plans. Pilot demonstration projects based on plans above will be developed, implemented and evaluated in three States, one in North bordering with the United States, Baja California, one in Jalisco and one in Federal District (México City)						780,000	150,000	630,000
Activity 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						1,040,000	200,000	840,000
Activity B6	Develop, implement and evaluate training strategy for public and recycling enterprises (based on Outcome C results) as well as states governments						520,000	100,000	420,000
Activity B7	Characterize nationwide recycling industry, including listing and characteristics of industries, establishment of a registration and						600,000	200,000	400,000

Project Activities	Description of Activities	Yr 1	Yr2	Yr 3	Yr 4	Yr 5	Total	GEF	Co-financing
	certification system to ensure the adoption of environmentally sound e-waste management practices								
Activity B8	Enhance nationwide e-waste information exchange platform, linking waste streams and safe processors						260,000	50,000	210,000
Activity 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 including demonstrating of how a good operation can work and development of a best practice guide						6,860,000	1,300,000	5,560,000
Activity 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						2,860,000	550,000	2,310,000
Activity C3	Develop a feasibility study and design of a pilot integrated recycling facility with possible investment of a proponent private sector partner						2,780,000	200,000	2,580,000
	Sub-total Component 2						17,000,000	3,250,000	13,750,000
Component 3: Reducing risks through elimination of POPs pesticides stockpiles and wastes									
Activity D1	Prepare update of detailed inventory of remaining POPs pesticide stockpiles and associated waste and analytical estimates of POPs						433,000	100,000	333,000
Activity D2	Produce inventory, initial prioritization screening and risk assessment of POPs pesticide contaminated sites including training on site assessment for relevant government officials and service providers						217,500	50,000	167,500
Activity D3	Waste Management plan from identification through to destruction for pesticides designed and tested at state pilot scale						650,000	150,000	500,000
Activity E1	Assess qualification of cost effective commercial options for the environmentally sound destruction of POPs pesticide stockpiles and wastes consistent with international standards						217,500	50,000	167,500
Activity E2	Complete environmentally sound destruction of at least 400 tons confirmed inventory and may be up to 1,200 tons of POPs pesticide stockpiles and waste pending findings of an updated inventory during project implementation						3,680,000	850,000	2,830,000
Activity E3	Develop feasibility study of present processes for recycling of pesticide used containers, considering technological and economical aspects						650,000	150,000	500,000
Activity F1	Design and develop detailed remediation plans on up to 3 priority POPs pesticide contaminated sites						217,500	50,000	167,500

Project Activities	Description of Activities	Yr 1	Yr2	Yr 3	Yr 4	Yr 5	Total	GEF	Co-financing
Activity F2	Develop first phase remediation plans for up to 10 POPs pesticide contaminated sites						217,500	50,000	167,500
Activity F3	Enhance the national programme for ongoing management of POPs pesticide contaminated sites						217,000	50,000	167,000
	Sub-total Component 3						6,500,000	1,500,000	5,000,000
Component 4: Obsolete pesticide management capacity strengthening									
Activity G1	Undertake assessment of national institutional capacities for establishment of obsolete pesticide management plans at state level						300,000	50,000	250,000
Activity G2	Develop outreach and training programmes on obsolete pesticide management for pesticide end-users and waste management and law enforcement government officers						300,000	50,000	250,000
Activity G3	Update national pesticide waste management guidelines, including reporting formats						300,000	50,000	250,000
Activity G4	Deliver reinforcement of State and municipal level obsolete pesticide and used containers collection programme						900,000	150,000	750,000
Activity G5	Develop a national replication programme for sustainable obsolete pesticide management						300,000	50,000	250,000
	Sub-total Component 4						2,100,000	350,000	1,750,000
Component 5: Monitoring and evaluation									
Activity H1	Undertake continuous monitoring and periodic progress reviews, apply adaptive management to the project in response to needs and findings of the mid-term evaluation						550,000	110,000	440,000
Activity H2	Conduct terminal evaluation and disseminate lessons learned and best practices at national level						200,000	40,000	160,000
	Sub-total Component 5						750,000	150,000	600,000
Component 6: Project Management									
Activity I1	Strengthen institutional capacity for project management; train staff on relevant GEF and UNDP requirements on project management						27,000	5,000	22,000
Activity I2	Undertake day-to-day project management activities to ensure smooth and timely implementation of project activities						1,443,000	265,000	1,178,000
	Sub-total Component 6						1,470,000	270,000	1,200,000
	PROJECT TOTAL						28,820,000	5,720,000	23,100,000

5. MANAGEMENT ARRANGEMENTS

5.1 Arrangements and responsibilities

118. The project will be executed under NIM modality, with execution by the Ministry of Environment and Natural Resources (SEMARNAT) following UNDP's Programme and Operations Policies and Procedures, per its role as Implementing Agency. Execution of the project will be subject to oversight by a Project Steering Committee, detailed below. SEMARNAT will coordinate the project and chair the Project Steering Committee which in the short-term will provide the technical support for the Regulation while gradually shifting the responsibility toward the permanent government structures. Day to day coordination will be carried out under the supervision of a Project Coordination Unit (PCU) and corresponding staff, also detailed below. The executing agency will take responsibility for different outcomes/activities according to existing capacities and field realities, ensuring effective and efficient use of GEF resources.

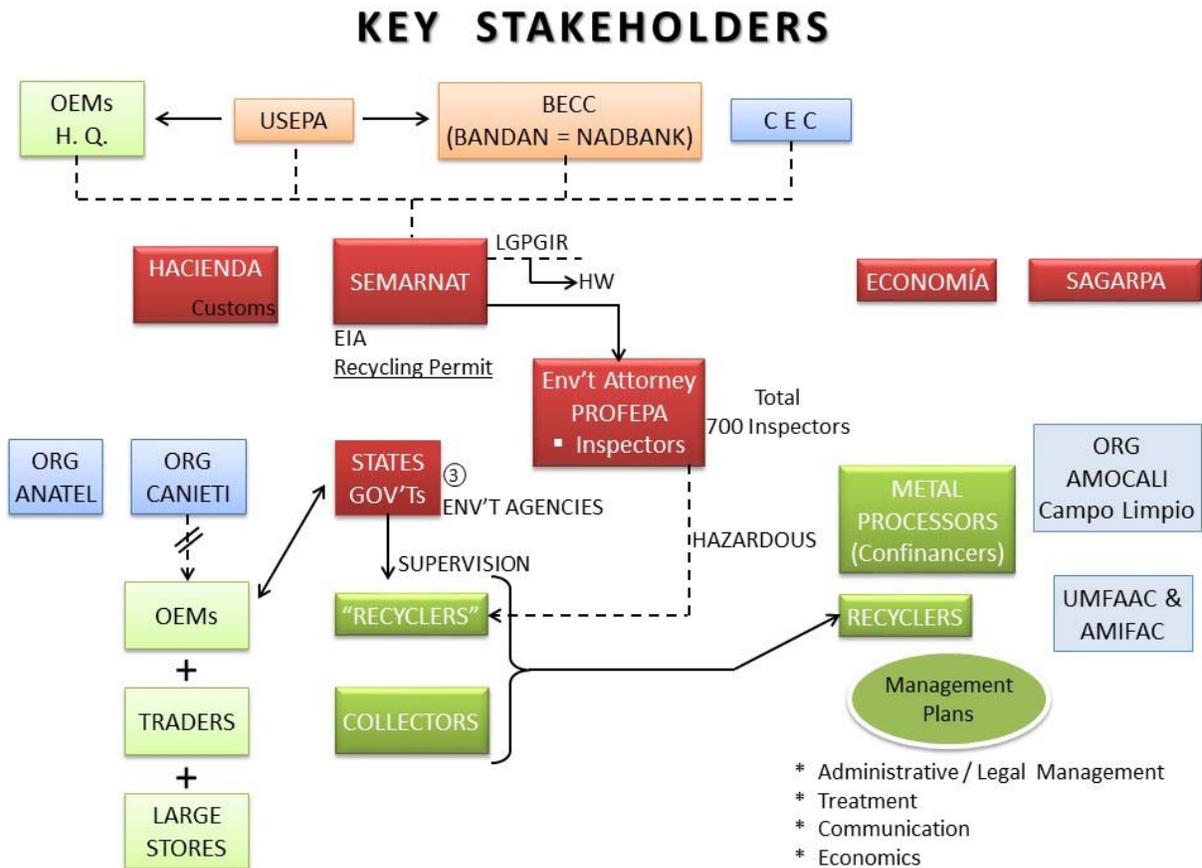
119. In order to accord proper acknowledgement to GEF for providing funding, a GEF logo would appear on all relevant GEF project publications, including among others, project hardware and equipment purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgment to GEF. The 0 should be more prominent -- and separated from the GEF logo if possible, as UN visibility is important for security purposes.

120. For the implementation of this project, it will involve a wide range of stakeholders. The roles and responsibilities of the various key stakeholders directly involved in project implementation are described in the next page.

5.2 Key Stakeholders and their role in project implementation

Stakeholders	Project Implementation Role
SEMARNAT	Coordination of all activities, since waste management falls within its jurisdiction, is a focal point of the Stockholm Convention
SAGARPA	Support in the implementation of components 3 and 4, is the Ministry that runs the programmes of collection of pesticides used containers and has information on pesticide contaminated sites. Key in co-financing these components
Amocali (Campo Limpio)	Is an association of the main companies that produce and distribute pesticides in Mexico. It gathers AMIFAC and UMFAAC, which are two organizations of enterprises that produce and distribute pesticides; they will provide support in the identification and inventory of obsolete pesticides stocks and provide co-financing to Components 3 and 4.
Government of States	Key allies to implement management plans for both wastes. They have within their jurisdiction “Special Management Waste” (for e-waste) and have information as to the pesticides contaminated sites. Provide co-financing to Components 2, 3 and 4.
OEMs, Recyclers and Metallurgical extractive industries	Allies in the implementation of pilot demonstration projects. Key actions in the co-financing of Components 2, 3 and 4, and the National Replication Programme
Community-based groups, particularly informal sector collectors and recyclers	Key groups for ensuring that the ameliorated management practices are adopted throughout value chain. Recipients of training and dissemination of best practices. Consulted and integrated in the overall recycling value chain for ensuring inclusiveness and sustainability.
Anatel, Carnieti and Amocali	They are the 3 key organizations of manufacturers and sellers of cellular phones, electronics goods in general and pesticides, respectively. They will be responsible for Management Plan development.
United Nations Development Programme (UNDP-Mexico)	UNDP-Mexico is the Project Implementing Agency that works to overcome poverty and promote sustainable development in Mexico. UNDP-Mexico offers guidance, technical support, management tools, and theoretical and practical knowledge to national- and regional-level institutions to aid in implementing public policies, initiatives, and projects intended to overcome poverty. UNDP will support substantive project development and will make its installed capacity available to the Project, guaranteeing the accountability of the project.

Figure 2: Key Stakeholders



Note to Stakeholders Diagram

- OEM: Original equipment manufacturer
- USEPA: United States Environmental Protection Agency
- BECC: Border Environment Cooperation Commission
- CEC: Commission for Environmental Cooperation
- Hacienda: Ministry of Treasury
- SEMARNAT: Ministry of Environment and Natural Resources
- ECONOMIA: Ministry of Economy
- SAGARPA: Ministry of Agriculture
- PROFEPA: Federal Environmental Attorney
- ANATEL: National Association of Telecommunications
- CANIETI: National Chamber of Electronic Telecommunication and Information Technologies Industry
- States Governments
- AMOCALI: Organization of Agrochemicals Producers and Traders

Top line stakeholders in Figure 2 above are internationally based organizations that may be co-financers with concurrent projects, except for OEMs which are multinational enterprises that can also play an important role in the definition of their national branches to participate in project.

Second line stakeholders, Hacienda and Economía, are the Ministries of Treasury (Customs) and Economy, which may co-finance also with existing programmes on the implementation of pilots of SMEs in the formal and informal sectors recyclers

121. Oversight of project activities will be the responsibility of the PSC. Day-to-day operational oversight will be ensured by UNDP, through the UNDP Country Office, and strategic oversight by the UNDP/GEF Regional Technical Advisor (RTA) responsible for the project. This oversight will include ensuring that the project practices due diligence with regard to UNDP's Environmental and Social Screening Procedure.

122. Implementation will be carried out under the general guidance of a Project Steering Committee (PSC) which will be responsible for making management decisions for the project by consensus, especially the operational plans, annual reports and budgets of the project. The PSC will be co-chaired by UNDP and SEMARNAT and will meet no more than four times per year to review project progress and approve upcoming work plans and corresponding budgets. The PSC will be in charge of the overall supervision of the project, providing strategic guidance for its implementation, ensuring that this proceeds in accordance with a coordinated framework of government policies and programmes, and in accordance with the agreed strategies and targets laid out above in this Project Document. The PSC will also approve and supervise the hiring and work of staff under the Project Coordination Unit, detailed below. In order to ensure UNDP's ultimate accountability, the PSC decisions should be made in accordance with standards that ensure development results, cost-effectiveness, fairness, integrity, and transparency.

123. The responsibilities of the PSC shall include, but not be limited to: (1) Review, approve and amend this project document, including the Monitoring and Evaluation (M&E) framework, and the implementation plan; (2) Monitor compliance with the Project's objectives; (3) Discuss progress and identify solutions to problems facing any of the project's partners; (4) Review and approve the AWP and the consolidated financial and progress reports; (5) During the life of the project, review proposals for major budget re-allocation such as major savings or cost increases, or for use of funds for significantly different activities; (6) Review evaluation findings related to impact, effectiveness and the sustainability of the project; (7) Monitor both the budget and the prompt delivery of financial, human and technical inputs to comply with the work plan; (8) Ensure the participation and ownership of stakeholders in achieving the objectives of the project; (9) Ensure communication of the project and its objectives to stakeholders and the public; (10) Approve the project communication strategy and public information plans prepared by the PSC; (11) Facilitate linkages with high-level decision making; (12) Convene ordinary meetings to consider the Technical Committee's proposals and recommendations, as well as the progress made by the project; and (13) Convene, if necessary, extraordinary meetings.

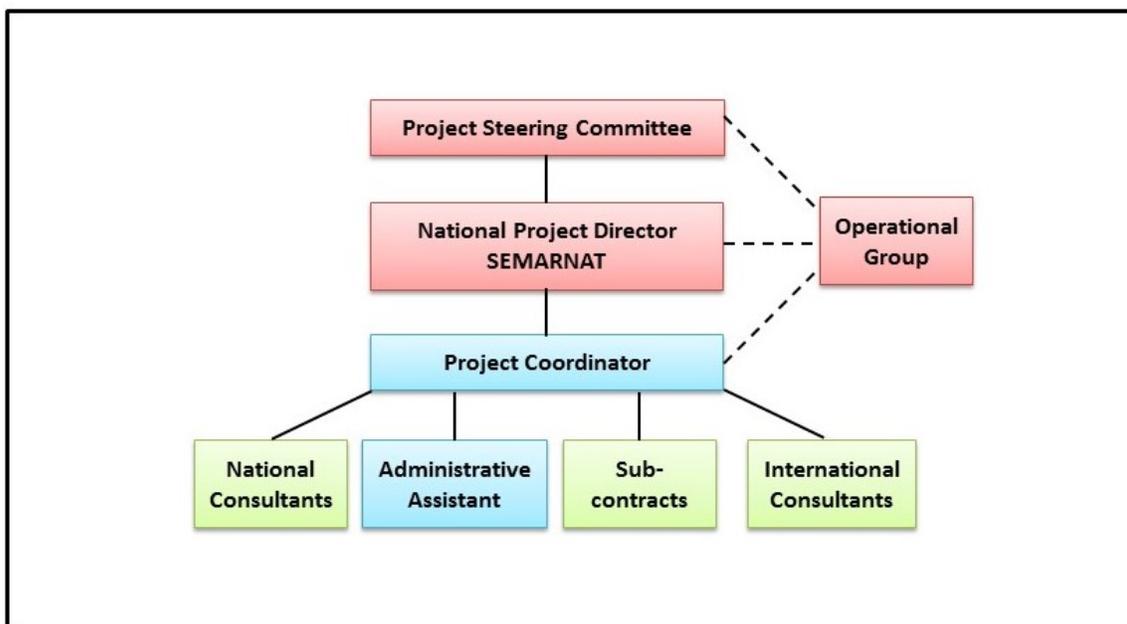
124. An *Operational Group* will be established to provide a forum for ad-hoc discussions amongst project partners regarding implementation of specific project activities. This is a technical operational group which includes project's partners and involved stakeholder organizations (inter alia SEMARNAT, SAGARPA, industry representatives, CSOs and Universities). The OG will provide advice for the technical decision making of the project. The OG will meet twice a year to oversee the project's progress and to provide strategic guidance in operational decisions. The PCU should facilitate and work as the secretariat of the OG, and maintain constant coordination and communication with the OG.

125. The *National Project Director (NPD)*, a senior representative of SEMARNAT, will be responsible for the overall direction of the Project to ensure that the necessary inputs are available to execute the Project. She/he will establish and provide overall guidance to the PCU. The NPD is responsible for overseeing the work undertaken by the team. The NPD will submit relevant documentation to the PSC for endorsement.

126. Day-to-day management and coordination of the project will be under the supervision of the *Project Coordinator (PC)*. She/he will keep the PSC updated on project advances and challenges as needed. The NPD will report to the PSC on progress made and issues to be resolved. The NPD will oversee the project and carries out overall responsibilities and accountabilities. The PCU will be responsible for the general management actions of the project, such as the preparation of consolidated annual work plans and technical and financial reports to be presented to the PSC and the OG, with the aim of ensuring that advances in relation to the goals and key milestones of the project are achieved as planned.

127. Implementation of different outcomes/activities will be taken up by the executing agency (SEMARNAT) with strategic support from key partners according to existing capacities with the aim of efficient use of GEF resources.

Figure 3: Organizational Structure of the Project



Administrative arrangements

128. The Government of Mexico has committed in-kind co-financing to the Project to an amount of US\$ 6,800,000. These resources will mainly be used for addressing pesticides used containers, salaries and travel expenses of project personnel and participants, equipment, and basic operation and management expenses.

129. To manage the resources, UNDP will make its installed capacity available to the Project, guaranteeing that their use is both transparent and prompt. During the first year of execution, the PSC will agree if it is necessary for the project to be implemented under an Advance Resources Modality. The Advance Modality will be carried according to UNDP Programme and Operation Policies and Procedures (POPPs) and it will be agreed by the PSC for which type of activities it will be used.

130. It should be mentioned that any services provided to the project by UNDP will be in accordance with its internal guidelines and regulations. Please see additional information in Section 5.4 below.

131. The project will be financed by the GEF with a total amount of US\$ 5,720,000.

132. As an implementing agency, UNDP earns a fee (General Management Services – GMS) from the GEF upon approval of the project. The fee is used to cover the costs incurred by UNDP, both at the Headquarters and in the Country Office, in supporting substantive project development. The total fee that UNDP will receive is US\$543,400 for the full-size project, in addition to \$9,500 under the PPG phase.

5.3 Collaborative arrangements with related projects

133. 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.

134. 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.

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

136. 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.

137. 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.

5.4 UNDP Support Services

5.4.1 Commitments by UNDP and the Mexican government to provide support services

138. The support services required of UNDP will be provided in accordance with the conditions mentioned below.

139. UNDP Country Office can provide the necessary support services and assistance requested, whether to prepare reports or make direct payments. In providing these services, UNDP Mexico will check whether the capacity of the designated institution has been increased to enable it to directly carry out these activities.

140. UNDP, when asked to do so by the designated authority, may request support services for the programme of the project, including:

- National and international technical support provided by the United Nations System
- Project design and strategic planning
- Project administration by making technical and financial follow-up available, with a results-based approach.
- Develop international, national and local knowledge networks based on United Nations System experience.
- Participate in the selection of project personnel, assist in awarding contracts and suggest candidates (individuals or companies) for the project’s substantive and administrative work
- Acquire goods and services, in accordance with its procedures and policies

141. The acquisition of goods and services as well as contracting personnel for the project are both the responsibility of the Executing Agency (SEMARNAT) and of UNDP, and for its management UNDP’s policies, standards and procedures must be complied with. It is important to mention that the candidates for the posts of Project Coordinator and Administrative Assistant should be selected jointly by the Executing Agency (SEMARNAT) and UNDP Mexico.

142. Should any demands or controversies arise concerning the provision of services by UNDP, they will be dealt with according to this document's basic assistance model.

143. If there are changes in the need for support services while the project is in force, the project document will have to be revised as mutually agreed by the UNDP Resident Representative and the counterpart institution.

5.4.2 Equipment

144. In accordance with UNDP's procedures and standards, all resources and equipment gained through project support remain the property of UNDP and will be transferred during the lifetime of the Project according to UNDP's Programme and Operation Policies and Procedures. The Project Coordinator will supervise the correct use and maintenance of these resources and equipment.

5.4.3 UNDP Cost Recovery Policy

145. As per Determination and Decision of UNDP's Executive Board on the Cost Recovery Policy over Regular and Other Resource-funded projects, the GEF contribution is subject to UNDP's cost recovery as follows:

- (i) Direct Costs incurred in the provision of Direct Project Services (DPS) by UNDP. These costs shall be unequivocally related to specific activities and transactional services clearly identified, charged annually as per the UNDP Universal Price List. For more details, please see Annex 3.

5.4.4 Exchange rates

146. If payment is made in a currency other than United States dollars, its value will be determined by applying the United Nations operational exchange rate in force on the date of payment. If, before UNDP has used the total amount deposited, there is a change in the United Nations operational exchange rate, it will be adjusted in line with the value of the balance of unused funds. If this leads to a loss in the value of the balance, UNDP shall inform the donor with a view to determining whether the donor must provide additional funds. If these additional funds are not available, UNDP may reduce, or cancel its assistance to the project.

147. On the other hand, activities will also have to be adjusted to the cash funds available; also in this case, if there is a deficit because of exchange rate, UNDP has the obligation to inform the National Implementing Partner to determine whether it is necessary to transfer additional funds or simply to make budget changes.

148. In the event the project is suspended, reduced or cancelled, UNDP will return the unused funds at the United Nations operational exchange rate in force on the date they are returned; if there is an exchange rate loss, the deficit will be charged to the project.

149. In case of a surplus, the Project Steering Committee will decide how it is to be spent and what results are expected and will make the necessary work plan adjustments.

150. Because the Project Steering Committee will supervise and monitor the project based on a satisfactory and detailed work plan design, no unforeseen circumstances are expected that would imply administrative risks in its execution.

151. It is important to mention that any services provided by UNDP to the project will be performed under its internal policies and rules, as stated in the NIM guidelines.

5.4.5 Security

152. It is UNDP's priority to ensure basic minimum conditions of security within the project operation, and the project offices must comply with security requirements and operational standards established by the United Nations Department of Safety and Security (UNDSS)

153. To achieve the above mentioned requirement, there will be regular meetings, workshops and training for project team and contracted personnel under the project in order to familiarize them with the regulations, procedures and training necessary to ensure compliance with such standards.

154. In consultation with the UNDSS, held on March, 2011, UNDP provides the following support:

Services to strengthen project team's security, through training courses via electronic means such as:
a) On-line basic security course, and b) advance security in the field course.

155. In addition, to complement this training, UNDP provides project staff an induction session on security measures, current Operational Procedures (POV's), and brochure containing recommendations concerning specific issues. It is the responsibility of the Project Coordinating Unit to ensure that the personnel working on the project receive information that UNDSS develops.

156. UNDSS will review the facilities of the counterpart where project staff is based and issue recommendations to ensure compliance with MOSS.

157. UNDSS in Mexico will provide recommendations and, if necessary, assessment of venues in which events will be carried out under the project.

158. The staff recruited under the project will be working preferably in the offices of the counterpart (SEMARNAT) unless conditions require alternative arrangements. Access control and security of these facilities are responsibility of the counterpart. UNDP will request UNDSS to security-clear SEMARNAT's project facilities before project staff start working there.

159. The recommendations of the UNDSS review will be shared with the counterpart to guarantee the security of the personnel. Project Offices are expected to be MOSS compliant.

160. The resources necessary to implement these measures will be reviewed by the Project Steering Committee and will seek co financing from the counterpart for such purposes.

161. If the project requires renting offices spaces outside SEMARNAT's facilities, the project offices shall be checked and cleared by DSS according with the security principles and requirements established by UNDP (MOSS compliance). MOSS will be included in the terms of reference for office rental and spaces for workshops and hotels

162. All project workshops and activities promoted by the project will be held with external static security, ensuring safety of staff and participants.

163. Finally, UNDP regularly circulates a memo to those geographic areas that are considered at greatest risk for project staff. Project staff intended to travel to, or be stationed in the areas that are in a high security phase (indicated by UNDSS), must complete the Advance Course on Security the Field course and must obtain the security clearance by DSS.

5.5 Audit arrangements

164. The Government of Mexico will provide the UNDP Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government. The firm will be selected through a bidding process and will be subjected to a rigorous evaluation within the principles of transparency, neutrality and cost benefit.

165. The project will be audited in accordance with the UNDP Financial Regulations and Rules and applicable audit policies. An audit to the Project is an integral part of UNDP financial and administrative management within the framework of UNDP's accountability, internally and with regards to the GEF. The project will be audited to ensure that resources are administered in accordance with the financial regulations of the project document, workplan and budget. The project's budget should contemplate the resources

needed to carry out the audit. The firm selected by UNDP Mexico, through a bidding process and subjected to a rigorous evaluation within the principles of transparency, neutrality and cost benefit will take over this exercise in accountability.

5.6 Agreement on intellectual property rights and use of logo on the project's deliverables

166. The publications, research and products that are generated as part of the project are owned by SEMARNAT and UNDP.

167. In order to accord proper acknowledgement to GEF and UNDP for providing funding, the GEF and UNDP logos should appear on all relevant project publications and project hardware, among other items. Any citation on publications regarding projects funded by UNDP and GEF should also accord proper acknowledgement to both UNDP and GEF and should give the corresponding credit to the authors.

168. In addition, all the publications produced as a consequence of this document must include the following inscription: "The opinions, analyses and policy recommendations do not necessarily reflect the point of view of the United Nations Development Programme, of its Executive Board or of its Member States".

Learning and Knowledge Sharing and Communication Strategy

169. Being a knowledge network, UNDP promotes the sharing of experiences and lessons learned from the projects, so that they can be shared with the international community to help its people to forge a better life.

170. Therefore, UNDP in coordination with the executing agency will promote the systematization of experience and dissemination of products arising from the framework of this project as a cross in the results. These activities are covered in the annual work plan of the project and will be allocated resources of its budget for this purpose.

171. The PSC will define the communication strategy and review it regularly to promote the visibility of lessons learned and best practices in the implementation of project activities. The committee will also determine the adjustments to the project budget to accomplish this goal.

172. As part of the communication strategy, a project launching event with key actors will publicize its scope and its linkages to other programmes.

173. UNDP and SEMARNAT will also be coordinated in promoting these results drawing spaces of dissemination of the United Nations (World Environmental Day) and other spaces of common interest that will be accorded in the PSC in order to ensure the visibility of the project and its objectives.

174. The project will identify, analyze and share lessons learned that may benefit the design and implementation of similar future projects. Identifying and analyzing lessons learned is an ongoing process and the need to communicate such lessons should be

175. Finally, UNDP will continue a policy of access to information related to the project, respecting information that SEMARNAT considers confidential.

6. MONITORING AND EVALUATION PLAN AND BUDGET

176. The project will be monitored through the following M& E activities. The M& E budget is provided in the table below.

177. Project start: The project will be officially launched no later than three months after approval of the GEF CEO of this full-size project. This will include the Project Inception Workshop with participation of those personnel with assigned roles in the project organization structure, UNDP Country Office (CO) and where appropriate/feasible regional technical policy and programme advisors as well as other key stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

178. The Inception Workshop will address a number of key issues including: (a) Assist all partners to fully understand and take ownership of the project; (b) Detail the roles, support services and complementary responsibilities of UNDP CO and Regional Service Center (RSC) staff vis-à-vis the project team; (c) Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms; (d) The Terms of Reference (TOR) for project staff will be discussed again as needed; (e) Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks; (f) Provide a detailed overview of reporting, M&E requirements. The M&E work plan and budget should be agreed and scheduled; (g) Discuss financial reporting procedures and obligations, and arrangements for annual audit; (h) Plan and schedule Project Steering Committee (PSC) meetings. Roles and responsibilities of all project organization structures should be clarified and meetings planned. The first PSC meeting should be held within the first 2 months following the Inception Workshop.

179. An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

180. Project Implementation Workplan: Immediately following the Inception Workshop, the project will be tasked with generating a strategic workplan. The workplan will outline the general timeframe for completion of key project outputs and achievement of outcomes. The workplan will map and help guide project activity from inception to completion. To ensure smooth transition between project design and inception, the Inception Workshop and work planning process will benefit from the input of parties responsible for the design of the original project, including as appropriate relevant technical advisors.

181. Quarterly: Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform. Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Based on the information recorded in Atlas, a Project Progress Report (PPR) can be generated in the Executive Snapshot. Other ATLAS logs can be used to monitor issues, lessons learned etc. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

182. Annually (Annual Project Review/Project Implementation Reports (APR/PIR)): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

183. The APR/PIR includes, but is not limited to, reporting on the following: (a) Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative); (b) Project outputs delivered per project outcome (annual); (c) Lesson learned/good practice; (d) AWP and other expenditure reports; (e) Risk and adaptive management; (f) ATLAS QPR; (g) Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

184. Periodic Monitoring through site visits: UNDP CO and the RSC will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project

progress. Other members of the PSC may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RSC and will be circulated no more than one month after the visit to the project team and PSC members.

185. Mid-term of project cycle: The project will undergo an independent Mid-Term Review during mid-point of project implementation (project months 28 – 29). The Mid-Term Review will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization and terms of reference of the mid-term review will be decided after consultation between the parties to the project document. The TOR for this Mid-term Review will be prepared by the UNDP CO based on guidance from the RSC and UNDP-GEF. This independent expert will be recruited at least six months prior to the planned commencement of the Mid-Term Review. The management response and the review will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC). The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term review cycle.

186. End of Project: An independent Final Evaluation will take place three months prior to the final PSC meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the Mid-Term Review, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The TOR for this evaluation will be prepared by the UNDP CO based on guidance from the RSC and UNDP-GEF.

187. The Final Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC). The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

188. During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

189. Learning and knowledge sharing: Results from the project will be disseminated within and beyond the project intervention zone 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 project implementation through lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

Table 3: M& E Workplan and Budget

Type of M&E activity	Responsible Parties	Budget US\$ <i>Indicative cost, excluding project team staff time</i>	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> ▪ National Project Coordinator (NPC) ▪ UNDP CO, UNDP RSC 	10,000	Within first two months of project start up
Measurement of Baseline Indicators and Means of Verification of project results	<ul style="list-style-type: none"> ▪ UNDP/SEMARNAT/PCU will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members. 	22,500	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	<ul style="list-style-type: none"> ▪ Oversight by NPC ▪ Project team 	22,500	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> ▪ PCU ▪ UNDP CO ▪ UNDP RSC 	None	Annually
Periodic status / progress reports	<ul style="list-style-type: none"> ▪ PCU 	None	Quarterly
Project Steering Committee Meetings	<ul style="list-style-type: none"> ▪ NPC ▪ UNDP CO 	None	Following Project IW and subsequently at least Quarterly
Technical Advisory Committee Meetings	<ul style="list-style-type: none"> ▪ NPC ▪ UNDP CO ▪ UNDP RSC 	5,000	Annually
Mid-term Review	<ul style="list-style-type: none"> ▪ PCU ▪ UNDP CO ▪ UNDP RSC ▪ External Consultants (i.e. review team) 	30,000	At the mid-point of project implementation.
Final Evaluation	<ul style="list-style-type: none"> ▪ PCU ▪ UNDP CO ▪ UNDP RSC ▪ External Consultants (i.e. evaluation team) 	30,000	At least three months before the end of project implementation
Project Terminal Report	<ul style="list-style-type: none"> ▪ PCU ▪ UNDP CO ▪ local consultant 	0	At least three months before the end of the project
Audit	<ul style="list-style-type: none"> ▪ UNDP CO ▪ PCU 	15,000	Annually
Lessons Learned	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-CO ▪ UNDP-RSC 	10,000	Annually and at end of project
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	<ul style="list-style-type: none"> ▪ UNDP CO ▪ UNDP RSC (as appropriate) ▪ Government representatives 	5,000	Annually
TOTAL indicative COST (Excluding project team staff time and UNDP staff and travel expenses)		US\$ 150,000	

7. LEGAL CONTEXT

190. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of Mexico and the United Nations Development Programme, signed by the parties on February 23, 1961. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

191. The UNDP Resident Representative in Mexico City is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by the UNDP-GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

- (i) Revision of, or addition to, any of the annexes to the Project Document;
- (ii) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- (iii) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility, and;
- (iv) Inclusion of additional annexes and attachments only as set out here in this Project Document.

192. Consistent with Article III of the 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.

193. The implementing partner shall:

- i) 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;
- ii) Assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

194. 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 this agreement.

195. The executing partner agrees to undertake all reasonable efforts to ensure that none of 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/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

8. ANNEXES:

- Annex 1. Social and Environmental Screening (SESP)
- Annex 2. Terms of Reference of Key Project Staff
- Annex 3. Letter of Agreement for UNDP Direct Project Services
- Annex 4. GEF POPs Tracking Tool

Annex 1. Social and Environmental Screening (SESP)

Project Information

Project Information	
1. Project Title	Sound Management of POPs Containing Waste in Mexico
2. Project Number	PIMS4686
3. Location (Global/Region/Country)	United Mexican States

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?

Briefly describe in the space below how the Project mainstreams the human-rights based approach

The lack of adequate management of a Hazardous Waste like e-waste and obsolete pesticides, presents an enormous biological risk from water or soil pollution that can damage biodiversity resources and ecosystems of global importance. The project represents a direct benefit to environment, specific to the country and global wise. All activities are focused directly to the environmentally sound management of a large- and growing amount of waste. The country has activities already in progress but still more are needed.

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.

The design and subsequent implementation of this project have and will involve a wide range of stakeholders. Since early stage of project formulation, the PPG phase, and during project document preparation, consultation sessions have been conducted with the wide range of key stakeholders to exchange experience and knowledge to facilitate project formulation and design where stakeholders' interest and influence were assessed. Consultation missions were undertaken to evaluate State, municipalities, cities and enterprises to explore their engagement in participating in the project activities. These consultations, cooperation and coordination efforts has proven effective to generate efficient and effective stakeholder engagement during project implementation. Such consultations will also assure the interest of potentially marginalized individuals and groups are taken into account in the process of revision of legislations and enforcement.

Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment

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 recollectors 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

As e-waste contains persistent toxic chemicals which will be released into the environment through improper treatment process, serious threats are imposed to the ecological system and the human health at the dismantling sites. The recycling industry is related to sever health and safety risks for labours in this industry. Many of the workers in dismantling and processing e-waste informally are women and thus women and children become the group most directly impacted by the health risk in the work place, as well as due to exposure in the contaminated sites where most of this group inhabited.

By addressing the POPs/PTS release in e-waste processing and the environmentally sound destruction of obsolete pesticides in this project, health risks for workers, particularly the female works and their children will be reduced from exposure of POPs/PTS leading to ameliorated health situation for them. During implementation, the project will address the

priority concerns of vulnerable groups including female workers and the poor to assess and strengthen capacity to reduce POPs/PTS release sensitive streams. The project will ensure female participation in the related activities of training and capacity building. In addition, there will be two overarching interventions – awareness raising and multi-stakeholder’s participation – that will contribute to ensuring the successful implementation of gender mainstreaming.

Briefly describe in the space below how the Project mainstreams environmental sustainability

The project activities will become integral parts of an effective sound chemicals management scheme with institutional, financial and environmental long-term sustainability. Project activities will result in an effective regulatory and legal framework, an efficient infrastructure and strengthened capacity for sound chemicals management of e-waste and obsolete pesticides. Modification of the General Law for Prevention and Integral Management of Waste 2003 to incorporate e-waste as hazardous waste will bring effective enforcement and alignment with the Stockholm Convention. This will allow permanent enforcement by the Federal Environmental Protection Attorney (PROFEPA) on e-waste sound management with the regulations’ amendments prepared. The development of the required management plans and the demonstration of BAT/BEP with the introduction of international technology and capacity at selected States, for both the formal and informal recycling facilities will strengthen structure and capacity to ensure infrastructure and technological sustainability, to reduce POPs sensitive releases and ensure efficient and environmentally sound chemical management. Significant co-financing for this activity and the demonstration pilot projects will also contribute to successful technology demonstration and the long term sustainability of technological improvements, yielding significant reduction in POPs emissions at formal and informal recycling facilities. Development and testing of e-waste management plans in 3 important States will mainstream even more the already high perception on the subject of e-waste management. Management Plans are already established as part of the General Law for Waste as an important tool for sound management of wastes, either as special management waste or hazardous waste. Pilot projects in formal and informal recycling operations will help to reinforce the feasibility of the demonstrated processes as an economically viable alternative for POPs destruction. Special emphasis will be put in bringing the informal recycling operations to practice environmentally sound management of e-waste. The project also includes activities focus principally on an updated and accurate inventory of obsolete pesticide stockpiles, carrying out the environmentally sound elimination of significant quantities of obsolete POPs pesticide stockpiles (at least 400 tons of confirmed inventory) and addressing contaminated sites through containment/remediation activities. National and provincial level management plans will ensure sustainable ongoing and long-term management of obsolete pesticides. Finally, the project will provide proper infrastructure and strengthened capacity for efficient project monitoring and management to achieve project objectives. The structure and capacity developed will ensure long-term environmental sustainability

Part B. Identifying and Managing Social and Environmental Risks

<p>QUESTION 2: What are the Potential Social and Environmental Risks? <i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses).</i></p>	<p>QUESTION 3: What is the level of significance of the potential social and environmental risks? <i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i></p>			<p>QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?</p>
<p>Risk Description</p>	<p>Impact and Probability (1-5)</p>	<p>Significance (Low, Moderate, High)</p>	<p>Comments</p>	<p>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</p>
<p>Risk 1: : Risks and vulnerabilities related to occupational health and safety</p>	<p>I = 3 P = 1</p>	<p>Moderate</p>	<p>The operation of an informal sector that diverts a substantial amount of WEEE away from the national system and the formal processing operations, for</p>	<p>Ensuring that the financial flows from the EPR system reach down to local collectors and ultimately the consumers disposing of WEEE such that a financial incentive exist to supply the qualified and permitted WEEE processing facilities.</p>

		<p>example, non intentional burning of e-waste on landfills.</p> <p>The informal sector generally involves low income sectors of the population who currently undertake the polluting informal processing of WEEE, essentially in their home environments with the significant health effects on all ages and genders in close proximity. The transition of collection, dismantling and primary processing activities to appropriately sited and equipped locations supported by collective environmentally sound infrastructure and operating with appropriate workplace standards will positively change this situation, as well as better assuring an equitable distribution of revenues for labour provided.</p>	<p>This will be further supported by ensuring that all aspects of the WEEE value chain are registered and financed on an equitable basis.</p> <p>Public awareness and information campaign directed at consumers and informal collectors to promote WEEE be eventually channelled to formal sector for processing.</p> <p>The informal sector will be a key but difficult action in Mexico as well as in most other countries, and much efforts will be dedicated to address this issue. Strategy to convince the informal facilities to participate will be based on “confidence building” with them, by offering mainly free training workshops, information and technical support, and will be a key part of the outreach strategy that will take place from the beginning of the project.</p>
	QUESTION 4: What is the overall Project risk categorization?		
	Select one (see SESP for guidance)		Comments
	<i>Low Risk</i>	<input checked="" type="checkbox"/>	Minimal environmental and social risks related to this project have been identified.
	<i>Moderate Risk</i>	<input type="checkbox"/>	
	<i>High Risk</i>	<input type="checkbox"/>	
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?		
	Check all that apply		Comments
	<i>Principle 1: Human Rights</i>	<input type="checkbox"/>	None required

	Principle 2: Gender Equality and Women's Empowerment	<input type="checkbox"/>	None Required
	1. Biodiversity Conservation and Natural Resource Management	<input type="checkbox"/>	None required
	2. Climate Change Mitigation and Adaptation	<input type="checkbox"/>	None required
	3. Community Health, Safety and Working Conditions	<input checked="" type="checkbox"/>	Focused Social and Environmental Assessments will be performed in order to prevent POPs/PTS releases and protect workers and local residents
	4. Cultural Heritage	<input type="checkbox"/>	None required
	5. Displacement and Resettlement	<input type="checkbox"/>	None required
	6. Indigenous Peoples	<input type="checkbox"/>	None required
	7. Pollution Prevention and Resource Efficiency	<input type="checkbox"/>	None required

Final Sign Off

<i>Signature</i>	<i>Date</i>
<p>Marcia de Castro Resident Representative. UNDP Mexico</p>	<p>January 9, 2015</p>
<p>Edgar González Programme Officer - Sustainable Development. UNDP Mexico</p>	<p>January 9, 2015</p>

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks		
Principles 1: Human Rights		Answer (Yes/No)
1.	Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
2.	Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? ⁵	No
3.	Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	No
4.	Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	No
5.	Are there measures or mechanisms in place to respond to local community grievances?	No
6.	Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	No
7.	Is there a risk that rights-holders do not have the capacity to claim their rights?	No
8.	Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
9.	Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Principle 2: Gender Equality and Women's Empowerment		
1.	Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	No
2.	Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	No
3.	Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No
4.	Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? <i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i>	No
Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
1.1	Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services?	No

⁵ Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

	<i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i>	
1.2	Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	No
1.3	Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	No
1.4	Would Project activities pose risks to endangered species?	No
1.5	Would the Project pose a risk of introducing invasive alien species?	No
1.6	Does the Project involve harvesting of natural forests, plantation development, or reforestation?	No
1.7	Does the Project involve the production and/or harvesting of fish populations or other aquatic species?	No
1.8	Does the Project involve significant extraction, diversion or containment of surface or ground water? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i>	No
1.9	Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)	No
1.10	Would the Project generate potential adverse transboundary or global environmental concerns?	No
1.11	Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area? <i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i>	No
Standard 2: Climate Change Mitigation and Adaptation		
2.1	Will the proposed Project result in significant ⁶ greenhouse gas emissions or may exacerbate climate change?	No
2.2	Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	No
2.3	Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i>	No
Standard 3: Community Health, Safety and Working Conditions		
3.1	Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	No
3.2	Would the Project 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)?	No

⁶ In regards to CO₂, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

3.3	Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	No
3.4	Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	No
3.5	Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6	Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	No
3.7	Does the Project 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?	No
3.8	Does the Project 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)?	No
3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No
Standard 4: Cultural Heritage		
4.1	Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	No
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	No
Standard 5: Displacement and Resettlement		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	No
5.2	Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	No
5.3	Is there a risk that the Project would lead to forced evictions? ⁷	No
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	No
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No
6.3	Would the proposed Project potentially affect the rights, lands and territories of indigenous peoples (regardless of whether Indigenous Peoples possess the legal titles to such areas)?	No
6.4	Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No

⁷ Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

6.5	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.6	Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	No
6.7	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No
6.8	Would the Project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples?	No
6.9	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	No
Standard 7: Pollution Prevention and Resource Efficiency		
7.1	Would the Project 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 transboundary impacts?	No
7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	No
7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i>	No
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	No
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	No

Annex 2. Terms of Reference for Key Project Staff

Terms of Reference for Key Project Staff

The following are the indicative ToRs for the project management staff. The PCU will be staffed by a full-time Project Coordinator (PC) and a full-time Project Administrator/Finance Assistant, both of which will be nationally-recruited positions. ToRs for these positions will be further discussed with UNDP-CO and will be fine-tuned during the Inception Workshop (IW) so that roles and responsibilities and UNDP GEF reporting procedures are clearly defined and understood. Also, during the IW the ToRs for specific consultants and sub-contractors will be fully discussed and, for those consultancies to be undertaken during the first six months of the project, full ToRs will be drafted and selection and hiring procedures will be defined.

1. *Project Coordinator (PC)*

SEMARNAT, in coordination with the UNDP CO, will select the PC to carry out the duties specified below, and to provide further technical assistance as required by the project team to fulfill the objectives of the project. He/she will be responsible for ensuring that the project meets its obligations to the GEF and the UNDP, with particular regard to the management aspects of the project, including supervision of staff, serving as stakeholder liaison, implementation of activities, and reporting. The PC will be responsible for the day-to-day management of project activities and the delivery of its outputs, including the implementation of SEMARNAT's quality management system and planning process (in the framework of the project). The PC will support and coordinate the activities of all partners, staff, and consultants as they relate to the implementation of the project. The PC will report to the National Project Director and will be responsible for the tasks described below.

The Government of Mexico ratified the Stockholm Convention on Persistent Organic Pollutants on 10 February 2003. For planning appropriate action in the field of controlling POPs substances and releases as well as fulfilling the reporting requirements of the Convention, Mexico submitted its National Implementation Plan (NIP) on POPs on 12 February 2008. The management of PCBs, PCB containing equipment as well as PCB contaminated soils, was considered as a priority area of action in the POPs National Implementation Plan. Consequently, the Government applied for GEF assistance for developing the project —Environmentally Sound Management and Destruction of PCBs in Mexico through UNDP. The five-year project will help Mexico to fulfil its requirements under the Stockholm Convention. Consistent with this objective, this project addresses POPs release sensitive e-waste stream in the recycling, dismantling and treatment processes of electronic waste (e-waste) and the environmentally sound elimination and management of obsolete POPs pesticides stockpiles. To achieve the project objective and outcomes, the project is structured in 6 components:

Component 1 focuses on strengthening public policy and institutional capacities that will facilitate minimizing POPs releases particularly relating to e-waste generation and obsolete pesticides stockpiles;

Component 2 covers the development of required infrastructure and the demonstration of BAT/BEP technologies in formal and informal recycling facilities with GEF support focused on introduction of international technology and capability;

Component 3 addresses risks of POPs exposure through environmentally sound destruction of obsolete pesticides stockpiles and containment/remediation of priority contaminated sites;

Component 4 strengthens capacities of State level authorities for inspection, enforcement and operational management, and develops obsolete pesticide management plans to ensure sustainability;

Component 5 supports the monitoring and evaluation of the project and dissemination of experience; and

Component 6 strengthens project management capacity to achieve implementation effectiveness and efficiency.

Duration of assignment: 5 years

Tasks:

As per UNDP guidelines in force the Project Coordinator is responsible for

- Timely implementation of the workplan as endorsed by the PSC.
- General and financial administration.
- Design and supervision of technical studies carried out by consultants
- Work planning, scheduling and project progress reporting.
- Ensuring M&E activities are fed back in project planning.
- Writing of Terms of Reference for project consultants.
- Tendering of contractual services.
- Monitoring and the quality control, particularly on safety, of input from consultants and subcontractors providing assistance to the project.
- Tendering for international services.

The Project Coordinator shall coordinate the contracting of all consultants and sub-contracts and monitor their performance.

Qualifications (indicative):

- Degree in Management, Engineering, physical sciences or economics
- Thorough knowledge of legislation and management of hazardous waste
- Knowledge of recycling industry and its management desirable
- Minimum of five years experience on national scale projects implementation
- Knowledge of the Stockholm Convention and Persistent Organic Pollutants highly desirable
- Experience in the management of environmental issues desirable
- Must be fully IT literate.
- Working knowledge of Spanish and English

2. Project Administrator/Finance Assistant

The Project Administrator/Finance Assistant is responsible for the financial and administrative management of the project activities and assists in the preparation of quarterly and annual work plans and progress reports for review and monitoring by SEMARNAT and UNDP. This position also provides support to the PC for the day-to-day management of the project and secretarial or assistance functions. The Project Administrator/Finance Assistant will have the following responsibilities:

Financial management:

- Responsible for providing general financial and administrative support to the project;
- Take own initiative and perform daily work in compliance with annual work schedules;
- Assist project management in performing budget cycle: planning, preparation, revisions, and budget execution;
- Assist the PC in all project implementation activities;

- Provide assistance to partner agencies involved in project activities, performing and monitoring general administrative and financial aspects to ensure compliance with budgeted costs in line with UNDP and GoM policies and procedures;
- Monitor project expenditures, ensuring that no expenditure is incurred before it has been authorized;
- Assist project team in drafting quarterly project progress reports concerning financial issues;
- Ensure that UNDP procurement rules are followed during procurement activities that are carried out by the project and maintain responsibility for the inventory of the project assets;
- Perform preparatory work for mandatory and general budget revisions, annual physical inventory and auditing, and assist external evaluators in fulfilling their mission;
- Provide assistance in all logistical arrangements concerning project implementation;
- Prepare all outputs in accordance with the SEMARNAT administrative and financial office guidance.

Administrative management:

- Make logistical arrangements for the organization of meetings, consultation processes, and media;
- Provide secretarial support for the project staff;
- Carry out the process to request international/local consultants and all project staff, in accordance with UNDP policies and procedures, and after approval of SEMARNAT;
- Draft agreements for entities related to the project, in accordance with instructions by the Contracts Office at SEMARNAT and in line with UNDP policies and procedures;
- Draft correspondence related to assigned project areas; provide clarification, follow up, and responses to requests for information;
- Assume overall responsibility for administrative matters of a more general nature, such as registry and maintenance of project files;
- Perform all other administrative and financial related duties, upon request;
- Provide support to the PC and project staff in the coordination and organization of planned activities and their timely implementation;
- Assist the PC in liaising with key stakeholders from the GoM counterpart, co-financing agencies, civil society, and NGOs, as required;
- Ensure the proper use and care of the instruments and equipment used on the project;
- Ensure the project utilizes the available financial resources in an efficient and transparent manner;
- Ensure that all project financial and administrative activities are carried out on schedule and within budget to achieve the project outputs;
- Resolve all administrative, financial, and support issues that might arise during the project;

Qualifications and skills:

- At least an Associate's Degree in finance, business sciences, or related fields;
- Experience in administrative work, preferably in an international organization or related to project implementation;

- Demonstrated ability in the financial management of development projects and in liaising and cooperating with government officials, NGOs, etc.;
- Self-motivated and ability to work under the pressure;
- Team-oriented, possesses a positive attitude, and works well with others;
- Flexible and willing to travel as required;
- Excellent interpersonal skills;
- Excellent verbal and writing communication skills in Spanish and English;
- Good knowledge of Word, Outlook, Excel, and Internet browsers is required;
- Previous experience working with a GEF-supported project is considered an asset;

Annex 3. Letter of Agreement for UNDP Direct Project Services

Letter of Agreement

STANDARD LETTER OF AGREEMENT BETWEEN UNDP AND THE GOVERNMENT OF MEXICO FOR THE PROVISION OF SUPPORT SERVICES

Dear Mr.

Minister – Ministry of Environment and Natural Resources (SEMARNAT)

1. Reference is made to consultations between officials of the Government of *Mexico* (hereinafter referred to as “the Government”) and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the relevant programme support document or project document, as described below.
2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.
3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the programme/project:
 - (a) Identification and/or recruitment of project and programme personnel;
 - (b) Identification and facilitation of training activities;
 - (c) Procurement of goods and services;
4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the programme support document or project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a programme or project, the annex to the programme support document or project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.
5. The relevant provisions of the Standard Basic Assistance Agreement (SBAA) between the Government of Mexico and the United Nations Development Programme, signed by the parties on 23 February 1961, including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the programme support document or project document.
6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SBAA and the project document.
7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the programme support document or project document.

8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.

9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

10. If you are in agreement with the provisions set forth above, please sign and return to this office three signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,

Signed on behalf of UNDP

Marcia de Castro

Resident Representative

[Date]

Signed on behalf of the Government

Mr.

Minister

Ministry of Environment and Natural Resources

[Date]

DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. Reference is made to consultations between the Ministry of Environment and Natural Resources (SEMARNAT), the institution designated by the Government of Mexico and representatives of UNDP with respect to the provision of support services by the UNDP country office for the nationally managed GEF-funded project ID PIMS4686 *Sound Management of POPs Containing Waste in Mexico* (Award ID 00084933) “the Project”.
2. In accordance with the provisions of the Letter of Agreement (LOA) signed on [date of signature] and the project document, the UNDP country office shall provide support services for the Project as described below.
3. Support services to be provided:

Support services*	Schedule for the provision of the support services	Cost to UNDP of providing such support services (where appropriate)	Amount and method of reimbursement of UNDP (where appropriate)
1. Payments, disbursements and other financial transactions	During project implementation	Universal Price List	Support Services
2. Recruitment of staff, project personnel, and consultants	During project implementation	Universal Price List	Support Services
3. Procurement of services and equipment, and disposal/sale of equipment	During project implementation	Universal Price List	Support Services
4. Organization of training activities, conferences, and workshops, including fellowships	During project implementation	Universal Price List	Support Services
5. Travel authorizations, visa requests, ticketing, and travel arrangements	During project implementation	Universal Price List	Support Services
6. Shipment, customs clearance, vehicle registration, and accreditation	During project implementation	Universal Price List	Support Services

* UNDP direct project support services will be defined yearly, and for those executed during the period, direct project costs will be charged at the end of each year based on the UNDP Universal Pricelist (UPL) or the actual corresponding service cost

4. Description of functions and responsibilities of the parties involved:

As described in the Project Document (Management Arrangements), the project will be executed under national implementation modality (NIM), with execution by the Ministry of Environment and Natural Resources (SEMARNAT) following UNDP’s Programme and Operations Policies and Procedures, per its role as implementing agency. Execution of the project will be subject to oversight by a Project Steering Committee (described in the Project Document). Day-to-day coordination will be carried out under the supervision of a Project Coordination Unit and corresponding staff. The SEMARNAT will take responsibility for different outcomes/activities according to existing capacities and field realities, ensuring effective and efficient use of GEF resources.

As described in the Project Document, the functions of the Participants are the following:

The Ministry of Foreign Affairs (SRE). The Government of the United Mexican States has designated the Technical and Scientific Cooperation Directorate of the SRE as the official counterpart of UNDP in Mexico. Its main responsibilities are:

- As the entity responsible for technical cooperation in Mexico, to act as the Mexican government's official counterpart to UNDP; specifically, and in accordance with the National Development Plan, to formalize approval of the project cooperation documents presented to UNDP by federal, state and private entities.
- If necessary, to make a written request to UNDP for reports on the project.
- To approve the annual audit plan for the project and, in accordance with UNDP standards and procedures, to convene an information and consultation meeting prior to the audit.
- If considered necessary, to attend at least one meeting a year of the project's Project Steering Committee.
- As required, to participate in tripartite meeting or in any follow-up or reorientation sessions.

The Ministry of Environment and Natural Resources (SEMARNAT) is responsible for the fulfillment of the project's results. Its main responsibilities are to:

- Lead the project implementation with the support of the PCU.
- Designate a representative to act as a permanent liaison between UNDP, the Ministry of Foreign Affairs and the Project Coordinator, and to participate in the Project Steering Committee meetings, and others as required, to ensure that the necessary inputs are available to execute the project.
- Prove the technical and administrative capacity to develop the project.
- Monitor the project's work plan and progress.
- Provide the name and describe the functions of the person or persons authorized to deal with UNDP concerning the project's matters.
- Approve Terms of Reference for technical personnel and consultancies for project implementation.
- Participate in the selection process of the consultants and approve all hiring and payment request.
- Provide the name and describe the functions of the person or persons authorized to sign the project's budget and/or substantive revisions of the project.

United Nations Development Programme (UNDP) has the responsibility to:

- Designate a programme officer responsible for providing substantive and operational advice and to follow up and support the project's development activities.
- Advise the project on management decision making, as well as to guarantee quality assurance.
- Be part of the project's Steering Committee and other Committees or Groups considered part of the project structure.
- Administer the financial resources agreed in the revised work plan and approved by the project's Steering Committee, and inform the National Implementing Partner of its origin and destination.
- Co-organize and participate in the events carried out in the framework of the Project.
- Use national and international contact networks to assist the project's activities and establish synergies between projects in common areas and/or in other areas that would be of assistance when discussing and analyzing the project.
- Provide Support in the development and instrumentation of the project's gender strategy.

Annex 4. GEF POPs Tracking Tool
(Attached separately as an Excel file)