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**Project Document template for nationally implemented projects  
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<b>Project title:</b> Environmentally Sound Management and Destruction of PCBs in Mexico: Second Phase	
<b>Country:</b> Mexico	<b>Implementing Partner:</b> Ministry of Environment and Natural Resources (SEMARNAT)
<b>Management Arrangements:</b> National Implementation Modality (NIM)	
<b>UNDAF/Country Programme Outcome:</b> UNDAF 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 / 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.	
<b>UNDP Strategic Plan Output:</b> Countries are able to reduce and manage risks of conflict and natural disasters, including from climate change	
<b>UNDP Social and Environmental Screening Category:</b>  <b>Overall Risk Rating:</b> Low Risk  <b>Risk Categories:</b> 3. Community Health, Safety and Working Conditions and 7. Pollution Prevention and Resource Efficiency.	<b>UNDP Gender Marker:</b>  GEN 1
<b>Atlas Award ID number:</b> 00084933	<b>Atlas Project ID number:</b> 00092730
<b>UNDP-GEF PIMS ID number:</b> 5479	<b>GEF ID number:</b> 9214
<b>Planned start date:</b> 01/01/2018	<b>Planned end date:</b> 31/12/2022
<b>LPAC date:</b>	
<b>Brief project description:</b> The five-year project led by The Ministry of Environment and Natural Resources (SEMARNAT) will help Mexico to fulfill its obligations under the Stockholm Convention for PCBs. Consistent with this objective, the project addresses the environmentally sound management and elimination of PCBs from electrical equipment. The project will dispose of 5,000 MT	

of PCBs and thereby reduce the risk of exposure of PCBs to humans and the environment. The project will also benefit directly 1,000 workers in electrical maintenance facilities and sensitive sites users, and up to 500,000 people with potential contact with contaminated transformers. It will also create a permanent national platform for PCB possessors to coordinate the elimination of PCBs during the remaining period up to 2028, which is expected to generate a positive economic impact for the country.; Improvement of PCBs Management Services and Certification of Destruction Facilities for PCBs; and Destruction of the identified stock of PCBs. These will be complemented by the lessons-learned captured during implementation, monitoring of project progress and provide adaptive feedback and evaluation of the project. To achieve the objective and outcomes, the project is structured into 4 components: The first component is related to the Strengthening of the market and enforcement of regulations for the sustainable elimination of PCBs. The outcome of this component is to have the private sector management and destruction services strengthened; potentially through the establishment and operation of a private-public entity, which will work in a coordinated and more economical manner, and by enforcing compliance with regulations, particularly Standard 133 for PCBs management. In the second component, destruction of PCBs, the management and maintenance services will be assessed, improved and certified as follows; Two existing and 2 new destruction and management facilities will be assessed. The improvements needed in the facilities will be evaluated, designed and implemented to upgrade their operations to fulfill all the requirements for the environmentally sound destruction of PCBs. The latter two will also receive technical and/or management support in order to improve their new operations. Additionally, 100 maintenance service enterprises will be evaluated and certified to provide supply services and avoid any further cross contamination of transformers. In Component 3, destruction of 5,000 MT identified PCB stocks in Mexico, will be achieved at a lower cost than what was determined in the feasibility study. The destruction of PCBs will be based on building a business model built on the Integrated Services Management System developed in previous PCB project. The model will be supported by an intensive marketing campaign, a coordination of operations of the different stakeholders and improved geographical supply of operations. The quantity of PCBs to be destroyed represents over 15% of estimated stock in Mexico. An updated feasibility study shows that savings of up to 30% in cost of elimination can be achieved through the application of the model. Component 4 will capture the lessons-learned, monitor project progress and provide adaptive feedback and evaluation. Annual workshops will be organized to create awareness, allow for feedback, and promote the networking among stakeholders during the project implementation.

<b>FINANCING PLAN</b>		
GEF Trust Fund <i>or</i> LDCF <i>or</i> SCCF <i>or</i> other vertical fund	USD 4,800,000	
UNDP TRAC resources	USD 0	
Cash co-financing to be administered by UNDP	USD 0	
<b>(1) Total Budget administered by UNDP</b>	<b>USD 4,800,000</b>	
<b>PARALLEL CO-FINANCING (all other co-financing that is not cash co-financing administered by UNDP)</b>		
UNDP	USD \$55,000	
Government	USD \$14,000,000	
Private Sector	USD \$ 6,760,000	
<b>(2) Total co-financing</b>	<b>USD \$20,815,000</b>	
<b>(3) Grand-Total Project Financing (1)+(2)</b>	<b>USD \$ 25,615,000</b>	
<b>SIGNATURES</b>		
Signature: print name below	Agreed by Government	Date/Month/Year:
Signature: print name below	Agreed by Implementing Partner	Date/Month/Year:
Signature: print name below	Agreed by UNDP	Date/Month/Year:

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## II. DEVELOPMENT CHALLENGE

1. The existence of PCB containing equipment in the energy sector still constitutes a risk to humans and the environment in Mexico. Section 5 of the Stockholm Convention on Persistent Organic Pollutants points out that each party shall adopt the measures as deemed necessary to reduce the total releases derived from anthropogenic sources belonging to each and all of the chemical products included in Annex C to protect the health of the population and global environment. In line with this, Mexico faces the challenge to phase-out of use all PCB-containing equipment by 2025, and assure environmentally sound final disposal of PCBs by 2028.
2. Significant results on PCB elimination and improved management of PCBs were obtained through the project GEF/UNDP 3270 (hereinafter called First Stage Project). However, Mexico continues to face important challenges for the management and control of PCBs in order to comply with the dates established by the Stockholm convention. Based on the current PCBs inventory, updated during the First Phase Project, it was determined that more than 37,667 mt of oil and PCBs-containing equipment (approximately 120,000 transformers) still existed in the country, from which just over 6,000 ton were eliminated, and an estimated quantity of 31,658 MT remains to be destroyed. The officially reported inventory by the Ministry of Environment and Natural Resources (SEMARNAT) is limited, but it is expected that at least 5,000 MT will be identified and eliminated during the project implementation.
3. The First Stage Project achieved the following: 1) elimination of 6,004 ton of PCBs material and surpassed the co-financing target by 33%; 2) establishment of a pilot programme for "Integrated Services Management System (ISMS)" in the 4 States of Guanajuato, Chiapas, Distrito Federal (now Ciudad de México) and Nuevo León, which set the basic elements for its implementation in the whole country; 3) Development of the draft of Standard 133 and promote its publication in the Official Gazette (DOF) for sound management of PCBs in early 2016; 4) Certification of 13 electrical maintenance shops in best practices for PCBs management by a third party; 5) the development of an ISMS electronic information system for nationwide services and 6) the publication of 3 guidelines on technical issues and best practices. It is important to note that the Project also developed a feasibility study which determined that 272 MU\$ were required for the destruction of the estimated remaining PCB in the country. The results obtained in the first phase were very successful. However, the final evaluation established the need to improve other aspects of PCB management and disposal in Mexico, as the country faces an important challenge on PCBs to comply with the 2025 and 2028 targets of the Stockholm Convention due to the size and conditions of the country, and this represents a real development challenge for Mexico.
4. The subsequent paragraphs describe the 4 immediate causes of the Development challenge, and the three structural / root causes: 1) insufficient dissemination of regulations to PCBs generators and services suppliers and for awareness and information, 2) lack of permanent mechanism for management: logistics and collection and 3) no market certainty for service enterprises investment since demand is not growing and lifetime period is short.
5. Insufficient enforcement of new Standard 133 by the designated authority. The updated Standard, which regulates the management of PCBs in an environmentally sound manner, was published in early 2016. The main points are: Standard 133 now applies to all electrical equipment in use and not only to discarded electrical equipment; it establishes the compulsory analysis of transformers oils; it requires the creation of a maintenance log for all transformers; it creates a "bottom up" mechanism for the transformers inventory; it defines retro filling as a treatment option; electrical maintenance workshops are regulated as PCBs waste generators and requires that the companies comply with the implementation of good maintenance practices.
6. According to the Federal Environment Attorney (PROFEPA), not enough enforcement of standard 133 has been applied, since activities of inspection are thinly spread out in the country with just over 700 existent inspectors<sup>1</sup>. This pinpoints the need to strengthen PROFEPA's inspection capacity. Partly because of this, a lack of consistent demand for destruction services of PCBs has been observed, which in turn has caused the decrease of the number of destruction facilities for PCBs (and other hazardous materials). Additionally, some of those companies still in operation have federal permits that were issued many years ago, without expiry dates (meaning that their operations cannot be cancelled) and some of them do not operate in environmentally sound conditions, as ascertained by the assessment that took place during the first phase of the project. Therefore, they would at least need to be certified in "best practices", in order to assure compliance with national law and in accordance with international standards. A policy established in the beginning of 2014 prohibited the export of PCBs for destruction, but was modified again in 2016 to allow for exports of PCBs.
7. Insufficient management and elimination rate of existing PCB inventory. The destruction of the total existing estimated PCB inventory in Mexico of 31,658 MT (with approximately 11,000 ton of liquid) will not be reached by 2028 as requested by

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<sup>1</sup> Interview with PROFEPA's Under-Attorney

Stockholm Convention, with the current rate of destruction of PCBs in the existing facilities. For the remaining volume of PCBs, an average rate of about 2,900 MT of PCB contaminated material (1,000 MT of liquids with PCBs) need to be disposed annually, as opposed to the 1000 ton/year achieved during the First Phase of the project in contrast to the considerably lower figure of 150 ton/year average elimination before the first project started. Moreover, according to SEMARNAT, the elimination from the end of the First Phase (GEF/UNDP 3270), from July, 2015 to July, 2017, only 163 MT have been reported as destroyed, and 237 ton reported as destroyed by CFE in the same period. Nominal authorized destruction capacity is 31.175<sup>2</sup> ton/year, which officially includes 3 permits for chemical treatment (two of these have almost no operation) and 2 permits for incinerators (where one is suspended by the competent authority since 2016).

8. There is only one operating incinerator left in the country for this purpose, but with insufficient control of its operations. A second incinerator, which had been identified at the time of PIF development, has been closed down by Authority in 2016 because of below-standard practices. There are 3 facilities able to destroy PCBs by chemical processes. Yet only one with semi-mobile equipment is known to operate. 3 international enterprises have shown interest to invest in Mexico for the establishment of PCBs destruction facilities: two with chemical semi-mobile processes, and one of plasma<sup>3</sup>.
9. The only operating incinerator in the country has an authorized capacity of 12,000 Ton/year for PCB liquids destruction, while one of the companies that destroy PCBs with a chemical process has a 12,700 mt/year authorized capacity. Theoretically, this solution should be sufficient by itself to cover all of the country's current destruction needs<sup>4</sup>. However, some clarifications must be made in this regard. The former facility is a fixed bed process, where oils fed in have to be diluted by impregnation in other solids by at least 50%, which diminishes real capacity to half of that authorized. In addition to that, this facility did not provide the required PCBs mass balance when inspected in the first phase of project, and therefore does not guarantee an environmentally sound destruction of PCBs, according to international standards. Additionally, this facility also destroys many other hazardous materials, such as pesticides and even materials and goods seized by customs. A large part of their real operating capacity is therefore used for other purposes
10. Therefore, in spite of the existing nominal destruction capacity, it can be concluded that the low destruction rate is due to other factors such as insufficient enforcement of the norm as well as the fact that PCB contaminated equipment is dispersed over a large geographical area with a high transaction cost associated with its management and disposal.
11. Destruction and management services are relatively expensive for the individual enterprises that possess PCB contaminated equipment and often face a difficult financial situation. The paragraphs above might imply that no new facilities need to be installed until 2028 since enough installed destruction capacity already exists for the required elimination. However, in practice destruction facilities operate at less than 10% of their capacity and some previously existing facilities have ceased their operations, mainly due to the lack of demand as mentioned above. Also, cost wise other considerations must be made. From the feasibility study performed during the First Stage, the costs for the integrated management of PCB containing transformers without including the cost of transformer replacement are: Destruction: 15%; transport, logistics and indirect costs: 50%; decontamination of transformer: 21% and oil replacement: 14%. This means that the distance to transport the PCBs materials represent an important part of the cost. It was demonstrated during the First Stage that an approximate savings of 22% was realized by applying the ISMS, mainly by coordinating and facilitating the logistics. No such coordination currently exists in the country among PCB holders, with the exception of the 3 pilot states that were included in the first phase, as mentioned in paragraph 2.
12. Inadequate maintenance practices by service enterprises still prevails and continue to cause further cross contamination of PCBs. From the universe of more than 1,000 electrical maintenance workshops that exist in the country, only about 15 companies are certified in the use of best practices. Through the updated Standard 133, maintenance enterprises will have to register as owners of PCBs, and they will still have to introduce best practices for PCBs and for hazardous waste in general, which is strongly needed.
13. Therefore, the main barriers for a sound and cost efficient destruction of PCBs are: 1) the lack of coordination among PCB possessors for integrated management of their waste, particularly including the relatively expensive logistics of transport, and 2) the lack of trustworthy facilities and their destruction processes, and 3) lack of deeper awareness of PCBs possessor, waste owners and maintenance companies about requirement of the law..
14. This proposal is consistent with Mexico Stockholm Convention NIP update (2016) in section 5.2 Industrial COPs, Action Plan for PCBs, Strategic line 1, Priority action #1, "To program existing PCBs destruction and to support the following phase of the UNDP PCB Project"<sup>5</sup>.

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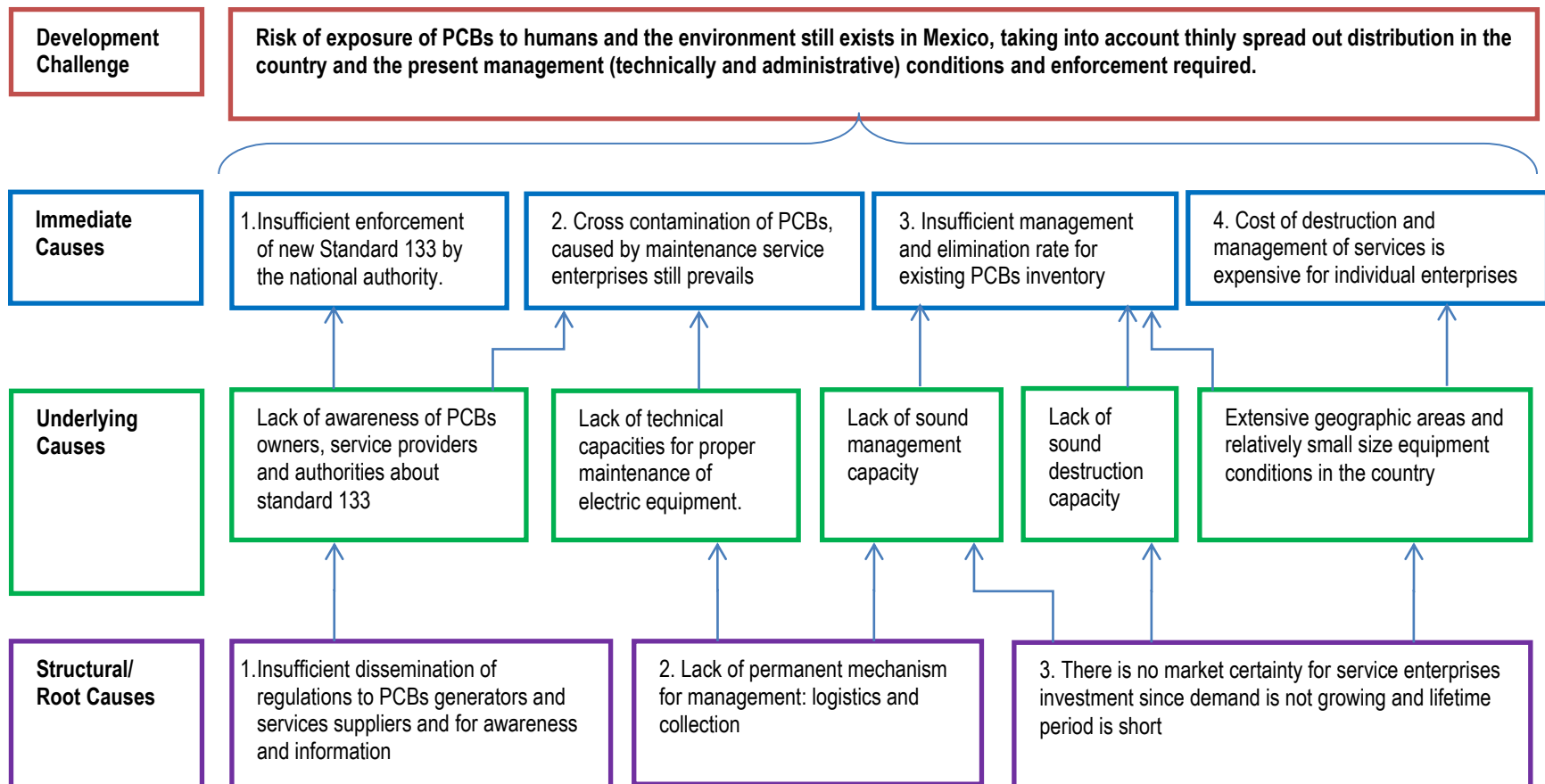
<sup>2</sup> SEMARNAT official communication

<sup>3</sup> Interview with enterprises; see also cofinancing letters on annex M

<sup>4</sup> During the First Stage, a 39,000 mt/year was the reported destruction capacity in Mexico

<sup>5</sup> Plan Nacional de Implementación del Convenio de Estocolmo sobre COPs en Mexico, p. 89 (original in Spanish)

15. This project also contributes to the overall objective of the Strategic Approach to International Chemicals Management (SAICM), which supports the achievement of the goal agreed at the 2002 Johannesburg World Summit on Sustainable Development of ensuring that, by the year 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health.
16. Furthermore, the project is consistent with the Sustainable Development Goals (SDGs). In particular SDG 3 “Ensure healthy lives and promote well-being for all at all ages”, and its target 3.9: “by 2030, substantially reduce the number of deaths and illness from hazardous chemicals and air, water and soil pollution and contamination”, as well as SDG 12 “Ensure sustainable consumption and production patterns”, and its target 12.4: “by 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment”.

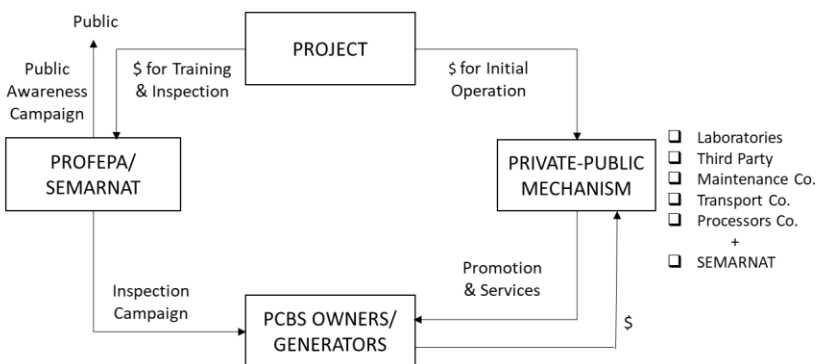


Theory of Change Problem Tree Diagram for “PCBs Environmentally Sound Destruction and Management in Mexico, 2<sup>nd</sup> Stage”

### III. STRATEGY

17. Mexico recognizes its status as a upper middle income country, and has adopted a strategy for this project to leverage national resources to further advance with the implementation of the Stockholm Convention with complying with its target on PCB management and destruction. GEF assistance will be crucial in reaching these goals over the coming years. This project is an important opportunity to ensure that the country has the adequate tools, technically and in management to properly handle PCBs currently and in the future, consistent with economic situation of the country and aligned with national programs and plans, as described in the Stockholm Convention National Implementation Plan (NIP) update of 2017. Therefore, it becomes of high importance to undertake activities that will carry on the momentum acquired by the country in the first phase to eliminate the remaining PCB stock, by creating an enabling environment that allows Mexico to comply with its obligations under the Stockholm Convention, and continuing the elimination of PCBs in a sustainable manner.
18. The objective of this Project is to “Minimize the risk of exposure of PCBs to humans and the environment, while promoting Mexico’s timely compliance with the Stockholm Convention’s requirements for PCB management, including its decommissioning and destruction provisions. The project will eliminate 5,000 MT of PCB containing equipment”. The strategy is aimed at addressing the immediate causes identified in the project with GEF- and co-financing, and through this, establish solutions that tackle the Structural causes in the longer term. For that purpose, key strategic elements are: 1) “to push” for the elimination of PCBs by owners through stronger enforcement of Standard 133 (and its public awareness)- a regulation that is already in place but needs a stronger impulse; this will in turn strengthen the market for PCB management and disposal services; And 2) “o pull” via decreased cost to be achieved through for example a private-public operation (or similar setup) of the Integrated Services Management System (ISMS), which in the First Phase Project demonstrated the savings it can generate with alternative- environmentally sounder destruction options as well as services offered closer to the problem. This is to be achieved through the implementation of an Economically Sustainable Model (ESM). The model is supported by the following elements: (i) a strong marketing campaign, (ii) a coordination of operations of the different actors, (iii) new disposal capacities created for PCB contaminated equipment (iv) better geographical distribution of operations (an area of opportunity exists for chemical processes in the northeast and south of the country, where about 40% of PCBs containing materials are present and mostly unattended). This is to be complemented with certification of electrical maintenance enterprises in order to reduce the cross contamination in the country. The Project’s Main Strategy is presented in Figure 1 below.

Figure 1. Economically sustainable model (ESM) for PCBs Elimination in Mexico

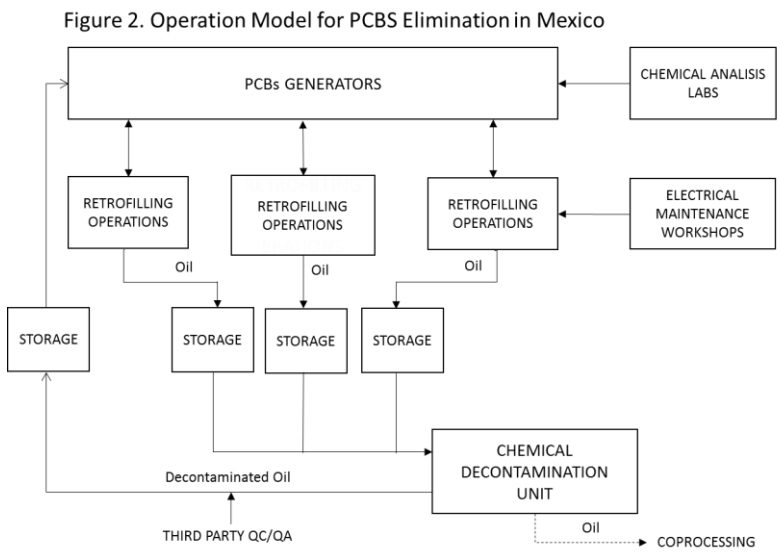


19. Component 1 will address immediate causes 1, 3 and 4 as well as root causes 1, 2 and 3 of the development challenge. It is aimed at enforcing regulations and strengthening the market for sustainable PCB management and elimination, through firstly supporting an intensive campaign, with public awareness-raising in communication media and other means of PROFEPA’s inspection activities for important industrial sectors. This will be developed based on PROFEPA’s Industrial Inspection Model, which consists of a sequence of actions: “Promote-Inspect-Apply Law-Verify-Communicate”. Secondly, the full rollout at a national scale of the implementation and operation of the Integrated Services Management System (ISMS) for handling and destruction of PCBs. Considering that Public-Private Partnerships as legal entities have proven not to be very easily established in Mexico (despite the fact that there is a General Law for this matter), a private entity or association of service suppliers will be established and supervised by a steering committee headed by the Government and paid for by the services supplied to enterprises (or a similar option). This Mechanism will operate the ISMS, through a



coordinating unit whose costs are estimated to amount to not more than 3 or 4 % of the total destruction costs, and will be included in the overall cost of the service. It will allow cost reductions of more than 25% for individual PCB holders, in addition to the outreach effect to the PCBs possessors. The ISMS will also provide assistance in the process to validate or improve the PCB inventories. Complementary to this, a financing scheme will be developed, based on previously developed feasibility study, to establish the conditions to finance the destruction of the remaining PCB stock in Mexico.

20. The second Component, addresses the immediate causes 2 and 3 and root causes 3 and 4 of the development challenge: PCBs destruction and maintenance services will be assessed, improved and certified as follows: assessment of existing destruction facilities will be conducted and new facilities will be evaluated. The identified improvements needed in the existing facilities will be evaluated, designed and implemented in order to upgrade their operations to fulfill all requirements for the sound destruction of PCBs. The control system of emissions and the exhaust gases post combustion conditions is one of the areas of special interest in the evaluation of the incineration process is. The new facilities will be provided with technical and/or management support in order to better establish their operations from the planning stage. The expected end result is that the existing incinerator in the country, in case it is upgraded, will operate according to international standards for destruction not only for PCBs but also for other waste that will allow to the operation of the company to be financially viable project in the long term. Additionally, one hundred electrical maintenance service enterprises will be certified in order to build a “critical mass” of workshops to supply services without cross contamination.
21. Component 3 addresses immediate causes 3 and 4 and root cause 4 of the development challenge. It consists of the continuation of the destruction of identified PCB stocks in Mexico, with a target of 5,000 mt, at a substantially lower cost than was determined in the feasibility study. This will be achieved through the building of the Economically Sustainable Model for the national scale-up of the ISMS operation, through the operation model of Figure 2. Moreover, cost reduction can be achieved under this scheme of work by reducing transport, logistics and indirect costs through improved coordination and consolidation of waste among PCB holders. In the case of use of portable or semi mobile chemical destruction equipment, these costs can be reduced even further. Some of the semi mobile equipment also provides an added value of moisture- Sulfur- and solids removal from the oil of transformers, which is a permanent maintenance need for users, and a value added to this specific technology. The PCBs amount set to be destroyed represents over 15% of estimated stock in Mexico, according to the calculations made during the First Stage and over 30 % of the official inventory reported by SEMARNAT (in 2014). From the First Stage experience, the project paid approximately 25 % of the overall cost of the operation, and the enterprises (individual possessors of PCBs) paid the majority of the costs. However, as expected before, the ISMS is expected to further lower the cost for individual PCB possessors, and the experience from the first project will be replicated in this project at a national scale.



22. The feasibility study to identify the cost structure of PCB Management and disposal in Mexico was developed during the First phase of the project and was updated during the preparatory phase for this project. Considerations were that the destruction of 6,009 ton were subtracted from the original inventory of 37,667 ton and also 400 ton reported destroyed by CFE and from SEMARNAT’s records during the period 2009-2017. The Inflation in the 2014-2017 period was also taken into account in the update feasibility study.. Finally, estimations of reduction in each of the cost categories were made considering the application of the ISMS and the use of semi mobile equipment as of new chemical processes. Results are

presented in Table 1 below. It's important to note that including the amount eliminated in the period that reduced the total volume, the phaseout cost was overcome back by inflation and it is larger than the 2014 reference, increasing from 282 MU\$ to 305 MU\$. However, by application of the ISMS and the semi-mobile chemical processes, savings of about 127 MU\$ may be achieved. More precise figures will be obtained through the operation of ISMS.

**Table 1 - Cost of PCBs management and Elimination, form updated feasibility study**

Cost Component	Figures in thousands of US\$				
	Original 2014 (Note1)	Reduced 2017 (Note2)	+Inflation (Note 3)	With ISMS (Note 4)	%
Destruction (Oil + Transformer)	30,827	25,917	31,531	28,378	16
Transport (Includes maneuvering)	22,088	18,569	22,592	11,296	6
Retrofilling (rinsing + refilling + chem. analysis)	40,138	33,744	41,055	28,739	16
Oil replacement	27,141	22,818	27,762	13,881	8
Indirect (Personnel + travel expenses)	75,619	63,574	77,347	38,674	22
Transaction (ISMS + personnel + infrastructure)	10,703	8,998	10,948	10,948	6
<b>Subtotal</b>	206,516	173,620	211,236	131,915	74
Transformer replacement	76,174	64,040	94,095	47,048	26
<b>Total</b>	282,690	237,660	305,331	178,963	100

Notes:

- 1) Original figures from Feasibility Study for 37,667 Ton, at market costs
  - 2) Current PCB inventory (corrected with quantities destroyed in 2009-2017 period = 31,658 MT)
  - 3) Adjustment of inflation from 2014 to 2017
  - 4) Expected reductions in cost by ISMS + chemical processes
23. Finally, component 4 will capture lessons-learned, monitor the project progress and provide adaptive feedback and conduct independent evaluations. Initially, activities, results and lessons-learned from the operation of ISMS and its Private-public mechanism will be assessed, documented and shared with other countries with similar inventory and geographic conditions. The knowledge management system will be implemented in order to establish the operation for the years to follow and operate without GEF financial support. In particular component 1, Output 1.2 will be established as an almost on-line reporting activity, since the ISMS through the PPM is going to be operated as “business”, and financial and strategical results will be of high importance, considering the “learning curve” will need to be accelerated. Thereby the need of a close follow-up of project development and achievements. By the end of the project, there will be estimated over 20,000 ton yet to be destroyed in only 6 years left to the 2028 goal; lessons will then be tried to be shared as said, with countries of the LAC region in as dynamic a way as possible. . Annual workshops will be organized to create awareness, request feedback, and allow for networking among stakeholders during the project and also with other countries in the LAC region.
  24. Present timely strategy nurtures basically on the experience gained in the first phase but also on other countries lessons, such as Argentina. The strategy is designed to result in the improved management and control of PCBs in particular, but of other toxic chemical substances in general.

<b>Project Objective</b>	<b>Minimize the risk of exposure from PCBs to humans and the environment, while promoting Mexico’s timely compliance with the Stockholm Convention requirements for PCB management, including convention decommissioning and destruction provisions. The project will eliminate 5,000 MT of PCB containing equipment.</b>			
<b>Project Components</b>	1. Strengthening of market bases and of regulations enforcement for sustainable PCBs elimination	2. Improvement of PCBs Management Services and Certification of PCBs Destruction Facilities	3. Destruction of an identified stock of PCBs	4. Capture lessons-learned, monitor project progress and provide adaptive feedback and evaluation.
<b>Project Outputs</b>	1.1 Inventories ratified by sampling of Federal Electricity Company, private industry and public sensitive sites.	2.1 Two existing facilities for PCBs elimination or management upgraded and certified	3.1 5,000 Metric Ton of PCBs contaminated materials eliminated, from sensitive sites, industry and CFE (Mexican state-owned electric utility)	4.1 M&E and adaptive management applied in response to needs, mid-term and final evaluation findings with lessons learned extracted.
1.2 Private- Public Mechanism for PCBs Integrated Services Management System for PCBs destruction established at national scale	2.2 Two new facilities for PCBs elimination or management established and certified	4.2 Results and best practices captured in knowledge management products and disseminated at national and international level.		
1.3 Financing mechanism for PCBs elimination concept developed, assessed and tested	2.3 One hundred Electrical Maintenance facilities certified			
1.4 Enforcement Program of federal Standard 133 for PCBs sound management established				
<b>Project Outcomes</b>	1 Inventory verified & ratified 1 Private-Public mechanism in operation 2,000 elimination proposals submitted 1 financial mechanism developed 250 responses to Inspection’s campaign	2 existing elimination/management of PCBs facilities upgraded & certified. 2 new elimination/management of PCBs facilities established & certified. 100 electrical maintenance workshops certified.	5,000 mt of PCBs eliminated 30% cost reduction of elimination obtained	29 GEF & UNDP M&E requirements met 2 evaluations conducted 5 Documents published

**Theory of Change Components and Outputs Diagram for “PCBs Environmentally Sound Destruction and Management in Mexico, 2<sup>nd</sup> Stage”**

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#### IV. RESULTS AND PARTNERSHIPS

##### i. Expected Results:

**Project Objective: Minimize the risk of exposure from PCBs to humans and the environment, while promoting Mexico's timely compliance with the Stockholm Convention requirements for PCB management, including convention decommissioning and destruction provisions. The project will eliminate 5,000 MT of PCB containing equipment**

25. The project will reduce the impact of PCBs to the environment by 5,000 Ton. The Project will have as beneficiaries 1,000 workers in electrical maintenance facilities and from direct potential contact, and 500,000 people at sensitive sites with potential contact with contaminated transformers. These results will be replicated and their impact will be extended after the project life ends. An installed and permanent national platform for PCBs elimination running up to 2028, is expected to achieve an economic impact benefit for the country, through the investment in new destruction facilities and the employment generated. The project will be executed through three technical components: Strengthening of the market for PCB management and destruction services and improved enforcement of regulations for sustainable PCBs elimination; Improvement of PCBs Management Services and Certification of PCBs Destruction Facilities; and Destruction of identified stock of PCBs (target 5,000 MT). These activities will generate lessons-learned, monitoring of project progress and providing adaptive feedback and evaluation (Midterm Review and Terminal Evaluation).

#### **Component 1. Strengthening of market bases and of regulations enforcement for sustainable PCBs elimination**

26. The outcome of this component is related to the activities of the private sector's PCB management and destruction services strengthened through the establishment and operation of an efficient low-cost private-public entity (or similar option). This entity will comply with regulations, particularly Standard 133 for PCBs management.  
Outcome 1 Indicators: 1 Inventory verified & ratified; 1 Private-Public (or similar) mechanism in operation; 1,000 elimination proposals submitted; 1 financial mechanism developed; and 250 responses to Inspection's campaign

The outputs to be produced for the outcome (and their corresponding activities) include:

27. *Output 1.1) Inventories ratified by sampling of Federal Electricity Company (CFE), private industry and public sensitive sites.*  
Inventory developed in the First phase was thorough and sampled over 0.1% of the total universe. That is almost 3,000 transformers from a universe of 2.2 million. However, the current inventory needs to be rechecked since CFE, claims there is very little left in their stocks that contain PCBs<sup>6</sup>. Moreover, the Company believes that the distribution sector may concentrate a higher volume of PCBs (to be confirmed during implementation).  
Resources will be assigned to sample around 1,000 transformers during the first year. Half of them are owned by CFE and the other half are located in the public distribution lines. The methodology used will be the same as in first stage, which is selecting the states with the highest population density and also where the highest concentration of industrial sites exist. The sampled sites will be selected based on their potential impact (either sensitive sites or public distribution transformers) and, if determined as PCBs positive, will be taken as a target for the promotion of the elimination services of ISMS, and will be included in those that will receive co-financing from the project. Operatively, a screening will be first using the quick test kit and then positive samples will be analyzed by a certified laboratory.
28. *Output 1.2) Private-Public (or similar) Mechanism for Integrated Services Management System for PCBs destruction established at national scale*  
This is one of the key output/outcome of the project. The operation of the Integrated Services Management System (ISMS) for PCBs handling and destruction will be rolled out and implemented on a national scale. The first activity is to legally constitute a Private-Public (or similar) Mechanism (PPM) that will allow for the rollout of the ISMS nationally. It will incorporate the different service suppliers, who showed interest in the preparatory phase: destruction facilities (existing and new), transport companies, chemical analyses laboratories, and electrical maintenance companies, among others. SEMARNAT is to chair the System's steering committee or board. The committee will seek the adequate operation of the system. Partial financial support to initiate system and a cost sharing for the first years of operation is considered in the

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<sup>6</sup> CFE owns half of the transformers in the country

Project. It is estimated that this system will cost less than 5 percent of the destruction costs of the complete PCBs inventory, and thus, will be absorbed by the ISMS, as the savings are expected to be higher.

The PPM will have two main lines of work. First, to promote the services offered by its members, as well as raise awareness about the impacts of PCBs on health and the environment. Promotion will make use (as a marketing tool) of the co-financing for destruction resources, for selected sites, such as sensitive or densely populated areas for distribution transformers. It will apply the principle of “first come – first financed” and thereby promote the early signing up to participate in the pilot phase of the ISMS). The project will train PPM personnel to achieve better and faster results. The second line of work seeks to offer the services to users all over the country in a coordinated manner. As a major goal, the mechanism is expected to bring economies of scale of at least 30% for PCBs disposal costs nationwide when compared with individual PCB disposal initiatives taken by those PCB holders. An important addition is that at least two chemical destruction companies that operate in situ without disconnecting the transformers have shown interest through co-financing letters provided to Project. The original idea from the First Stage will be taken up again, and it is based on the idea that a service site, located in a geographically strategic area covering a specific region, will be used as an “easy access point” for chemical treatment of the transformers. The semi-portable equipment will be located there and the services will be provided as a follow-up to a previous promotion campaign in that area. The way to evaluate performance of the association is the number of service proposals delivered. 2,000 proposals in the 5 years of the projects life means to deliver on average 2 proposals daily. For the future, the PPM supported by Project and based on their activities and results, will lobby with Representatives and Senators to update the application of the existing Law (LGPGIR, which permits hazardous waste importing, only for recycling purposes) in order to allow import of PCBs materials from Central and South America, for chemical destruction treatment, which in this case can be classified as “recycling”, since decontaminated oils can be reused for other or the same purposes

29. *Output 1.3) Financing mechanism for PCBs elimination concept developed, assessed and tested*

The project aims at setting the path for the full compliance with the 2025 and 2028 targets on PCBs under the Stockholm Convention. One important aspect is to extend the effects of the project beyond its lifetime and financing of PCB management and destruction services is key to this. It is estimated that about 180 MUS\$ will be needed to comply with that, even when we take the savings obtained with ISMS into account. The project will therefore develop a financing scheme, based on an adapted feasibility study, to establish the basis for conditions to finance the destruction of the remaining stock in Mexico, using the experiences under the Component 3 of this project.

30. *Output 1.4) Enforcement Program of federal Standard 133 for PCBs sound management established*

During the preparatory phase (PPG) of the project, enforcement officers from PROFEPA expressed the need and their commitment to implement an intensive inspection campaign when Project starts its implementation<sup>7</sup>. The Project will support PROFEPA'S enforcement campaign, based under its Inspection Model (which consists in this sequence of five actions: *Promote-Inspect-Apply Law-Verify-Communicate*). This will happen in three ways. First, an agreement will be signed with PROFEPA to make public presentations on its behalf on obligations related to PCBs, as part of first action: Promotion. This will be complemented with presentations in all possible public environment and industry events about Standard 133 and its implications.

Second, the Project will finance the training of a group of at least 20 young professionals that can support the second action: inspection activities, under PROFEPA's supervision and authority. This will be a “task force” group to enhance PCBs inspection activities in the whole country. The indicator to measure the output will be by the number of destruction services requests (or reports) after the inspection visits.

The third feature will support the fifth action: a permanent and well-designed communication strategy that will allow an adequate follow-up of enterprises that discovered they had PCBs contaminated equipment, and publish their success and/or failure stories, and provide recommendations for other potential PCB possessors.

## **Component 2. Improvement of PCBs Management Services and Certification of PCBs Destruction Facilities**

31. The outcome of this component is that operations of PCBs management, destruction and maintenance facilities will have improved processes, emissions control and management systems. The destruction facilities will be certified by a third party and must comply with established standards on: Incineration processes (particularly in their gaseous emissions) under international standards; chemical processes in their establishment (if new ones); and electrical maintenance companies will be certified in best practices in hazardous waste and PCBs management.

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<sup>7</sup> Interview with PROFEPA's Under-Attorney

Outcome 2 indicators: 2 existing elimination/management of PCBs facilities upgraded & certified; 2 new elimination/management of PCBs facilities established & certified; and 100 electrical maintenance workshops certified.

The outputs to be produced for the outcome (and their corresponding activities) include:

32. *Output 2.1) Two existing facilities for PCBs elimination or management upgraded and certified*

According to official records, four treatment facilities (3 of them chemical processes and 1 incineration facility) exist in México<sup>8</sup>. This output will involve: to update the assessment of all existing facilities, assess the possibility of adapting them and incorporating new ones and support their needed improvements. Technical assistance interventions in two of them will be provided in order to upgrade their operations and if possible to supply supplementary equipment. For the incineration facility, special attention will be paid to the upgrade of emissions control systems and the exhaust gases post-combustion conditions. This may require the development of test burns and sampling of gases and ashes in order to verify DE/DRE and other conditions of the stacks and wastes. For the chemical process(es) or other, technical assistance will also be provided.

There are at least two international companies that supply technology for chemical destruction of PCBs other than the use of sodium. Their semi mobile equipment can process large transformers in situ and in operation or various smaller transformers can be treated in tandem and their results have been proved in many other countries. One such equipment is already operating in Mexico, but yet with limited outreach, owed to the causes mentioned in paragraphs 10 and 11. In both cases, the objective is to make sure that the sound and safe PCBs management, for which also best practices will be established and destruction/management facilities will be certified by a third party.

33. *Output 2.2) Two new facilities for PCBs elimination or management established and certified*

Two companies have shown interest in establishing new processes for PCBs elimination, either chemical or high temperature. There is also a manifest of interest of two electrical equipment maintenance companies which are interested in "upgrading" their operations to offer the service of refilling, as shown in the Operation model of Figure 2. Therefore, this output will provide the initial activities in assessing enterprises that are willing to participate, and have enough capability to undertake an upgrade in their PCBs management activities. The chosen or agreed upon enterprises will be trained and technically supported by the project. Finally, companies will be certified in the operation of their activities by a third party.

The upgraded enterprises will also act as a link between their frequent clients (and potential PCB possessors) for maintenance and the chemical destruction companies. This may as well reduce the overall elimination costs of PCBs.

34. *Output 2.3) One hundred Electrical Maintenance facilities certified*

Promotion activities will be first developed to disseminate Standard 133, present the ISMS and attract electrical maintenance companies. From over 1,000 workshops that provide these services in Mexico, the larger in size and better organized will be the first to be trained and certified (a few dozen are estimated). The certified workshops will be the first group to start participating in the coordinated actions of ISMS. In parallel, developing from work performed during the First Stage, a Standard for best practices in hazardous waste management in electrical workshops will be finalized and published. With the Standard, the rest of electrical maintenance workshops will be certified.

### **Component 3. Destruction of an identified stock of PCBs**

35. The outcome of this component is that an identified fraction of the total PCBs amount determined (which is over 15% of the inventory) is eliminated. This eliminated amount, besides helping to reduce the existent inventory, serves as an overall pilot of the ISMS application to the entire country allowing economies of scale.

Outcome 3 indicators: 5,000 mt of PCBs eliminated; 30% cost reduction of elimination obtained.

The output to be produced for the outcome (and its corresponding activities) include:

36. *Output 3.1) 5,000 Metric Ton of PCBs contaminated materials from sensitive sites, industry and CFE (Mexican state-owned electric utility) eliminated,*

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<sup>8</sup> SEMARNAT Official registry of authorizations

The elimination of PCBs materials is to be achieved by direct application of the ISMS through the PPM activities. Methodology will be adapted from that designed and implemented during the First Stage. In summary, PCBs equipment holders will be identified (initially through the inventory stage, output 1.1) and then through the promotion operations and from the inspection campaign. A proposal will be presented, and once a group of PCBs owners is agreed upon, the PCBs elimination process will be executed. Once the process is concluded results will be reported to SEMARNAT. Elimination will not exclude the option of exporting the oils and materials.

**Component 4. Capture lessons-learned, monitor project progress and provide adaptive feedback and evaluation**

37. The outcome of this component is that Project results are monitored and sustained, adaptive feedback and evaluation are undertaken and results reported to be replicated.

Outcome 3 indicators: 29 GEF & UNDP M&E requirements met; 2 evaluations conducted; 5 Documents published.

The output to be produced for the outcome (and its corresponding activities) include:

38. *Output 4.1) M&E and adaptive management applied in response to needs, mid-term and final evaluation findings with lessons learned extracted.*

The Project will provide the necessary means for the monitoring and evaluation (M&E) of project results in order to perform adaptive management of the programme and improve the implementation of the project. A Mid-term (MTE) evaluation will be executed between the second PIR and third PIR and the terminal evaluation (TE) will be prepared by independent evaluation teams and compiled into reports.

39. *Output 4.2) Results and best practices captured in knowledge management products and disseminated at national and international level.*

This output will enable consolidation of lessons learned extracted throughout the course of the project’s implementation and support dissemination of lessons-learned and experiences at national scale, and in collaboration with the GPSC at regional and global levels. Activities, results and lessons-learned particularly will be published in individual case study reports, which will help ensure access to this information by the wider stakeholder community to the experiences, failures and successes of the activities undertaken by the project. A dynamic on-line manual of the PPM will be developed to monitor closely its operation, and to be able to share it with other countries.

ii. Partnerships:

40. Partnerships for the succesful development of Project are mainly two: one with government (SEMARNAT and PROFEPA) and the other with private sector. The interaction with stakeholders is presented in Table 2.

**Table 2 - Project stakeholders, their role and their assumptions.**

<u>Name of stakeholder/initiative</u>	<u>What is the stakeholder/initiative currently doing to address the development challenge?</u>	<u>What will be the role of the partner in project's implementation?</u>	<u>What are the assumptions and expected results (to be) achieved by partners that are critical for the achievement of results of this project?</u>
Ministry of Environment and Natural Resources (SEMARNAT)	National authority for environmental policies and regulations on Hazardous Waste. Hosts GEF OFF, Stockholm, Minamata, Basel and Rotterdam Convention FPs. Implements the Stockholm NIP update (UNEP); Mercury Inventory Assessment (UNEP);	Project Implementing Partner (Lead). SEMARNAT will be responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources.  Kindly refer to Section IX: Governance and Management Arrangements for a detailed description of the role of the Ministry of Environment and Natural Resources (SEMARNAT) in the project's implementation.	Political and administrative support to project is provided. Co-financing the operation of the project Supervision of the Private-Public mechanism is provided Coordination with other stakeholders is achieved Timely permit issuing for mobile destruction processes
Federal Environment Attorney	This is the office in charge of Law enforcement at federal level. It is responsible for enforcement of Standard 133 and the General Law	Essential role for the entire project in Implementation of enforcement campaign for PCBs Standard and Law fulfillment	Full collaboration with project required. Agreement for collaborations is

(PROFEPA)	from which it stems.		obtained
Ministry of Energy (SENER)	Ministry in charge of Energy regulations and planning; Leads electrical sector towards sustainable development and environment protection as a corporative policy.	Political support for Inventory ratification. Cofinancing of project	Decision to collaboration with project required.
Federal Commission of Electricity (CFE)	National Governmental organization for energy generation, transport and distribution; they keep PCB inventories and periodically destroy the identified PCBs.	Support for Inventory ratification. Destruction of their PCB stocks. Cofinancing of project	Decision to collaboration with project required.
Private enterprises for PCBs elimination or management services	Supply and delivery of destruction and management services: PCBs destruction by chemical and by thermal processes, refilling of transformers and maintenance of transformers.	Second most important partners in project. Their role is the elimination and management of PCBs, and their participation in the Private-Public Mechanism and also through investment in new chemical process equipment to dispose of PCBs. Will be facilitated	New process equipment is installed. Participation in Private-Public Mechanism is assured.

iii. Stakeholder engagement:

41. As the projects aims to address a variety of processes, through the integrated management of PCBs, the project's stakeholders and intended beneficiaries are varied and range from decision makers within government agencies to common people that move around sensitive sites. The table 2 below summarizes the range of project beneficiaries/target groups the project aims to benefit and the ways in which the project aims to engage them.

**Table 3 - Type of intended project beneficiaries/target groups and ways in which the project will engage them**

<u>Project beneficiaries</u>	<u>Project involvement implications</u>	<u>Engagement strategy</u>
<u>Enterprises and Sensitive sites' maintenance workers</u>	<ul style="list-style-type: none"> <li>▪ Potentially work-related exposure to PCBs at the source.</li> <li>▪ Have a direct role in reducing the PCBs risk by fulfilling compliance of Standard 133 and best practices.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Raise awareness on the harmful effects of PCB leaks resulting from certain processes/practices and sharing findings.</li> <li>▪ Train on best practices and legal matters at work.</li> </ul>
<u>General Public, women, children, vulnerable population groups, etc.</u>	<ul style="list-style-type: none"> <li>▪ Potential exposure to PCBs in sensitive sites in case of releases.</li> </ul>	<ul style="list-style-type: none"> <li>▪ This sector will not be reached openly, as there is no direct involvement in the solution/operation of the project; they will only be informed of actions and warned only in case of a critical event taking place.</li> </ul>
<u>Enterprises and Sensitive sites PCBs owners</u>	<ul style="list-style-type: none"> <li>▪ They will be supplied services to eliminate their PCBs equipment at a lower cost</li> </ul>	<ul style="list-style-type: none"> <li>▪ They will be the focus of the promotion campaign by the PPM as well as of the inspection campaign of PROFEPA</li> </ul>
<u>SEMARNAT, SENER, PROFEPA, CFE (Government Agencies)</u>	<ul style="list-style-type: none"> <li>▪ Key actors for law enforcement in fulfilling their mission</li> </ul>	<ul style="list-style-type: none"> <li>▪ Raise High-level awareness.</li> <li>▪ Involvement in coordinated activities</li> <li>▪ Signing partnership agreements with PROFEPA.</li> <li>▪ Training of (auxiliary) inspectors</li> <li>▪ Jointly review/revise/develop regulatory measures</li> </ul>
<u>Suppliers of PCB management services</u>	<ul style="list-style-type: none"> <li>▪ They will have an increased business opportunity</li> </ul>	<ul style="list-style-type: none"> <li>▪ They will be invited to form part of the Integrated Services management System, and in some cases to invest, through the PPM</li> </ul>
<u>Financial Institutions/Bank</u>	<ul style="list-style-type: none"> <li>▪ Development of financial mechanism for full country elimination of PCBs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Raise awareness on the importance of PCB elimination by 2028.</li> <li>▪ Training.</li> </ul>

iv. Mainstreaming gender:

42. 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.

43. Regarding the handling of toxic chemicals in Mexico, it can safely be assumed that the main group in risk of exposure to PCBs in Mexico is first and foremost the maintenance workers in electrical workshops as a result of inadequate practices. This group will receive a special attention during the implementation of the project, including women should they participate in these activities. In everyday life, however, women and children may be potentially exposed, in varying degrees, to PCBs given that electrical distribution transformers are scattered over many streets, commercial centers, and even hospitals.
44. 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 type of chemicals encountered, and the resulting impact on human health. These gender dimensions will need to be reflected, both at the project and policy-level, on interventions pertaining to the sound management of chemicals in general and of POPs and BPCs in particular. As PCBs are present in different electrical equipment and materials, which would be released into the environment by improper equipment maintenance, serious threats are imposed to the ecological system and on human health at repair and service facilities and wherever there are electric transformers. Even though the employment of women in maintenance activities in the formal sector is limited, contaminated sites, or potentially sensitive areas such as water treatment plants, schools, and others, are frequently visited by women and children who are most directly at risk in the contaminated sites where the majority of them live.
45. In its implementation, the project will address the priority concerns of vulnerable groups to strengthen their capacities to reduce PCB leaks. The project will ensure female participation in activities related to training and capacity building. In addition, there will be two overarching interventions – awareness raising and multi-stakeholders participation – that will contribute to ensuring the successful implementation of gender mainstreaming.

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

46. Several GEF funded projects on PCBs have been developed in the Latin-American region, with different degrees of implementation and scale. Most of them are implemented by UNDP. A network among all the UNDP GEF project in the Chemicals and Waste Focal area exists in Latin America and the Caribbean, where lessons learned and best practices in the projects are shared among the projects. All projects meet at least once a year in a technical workshop organized by UNDP, but more frequent information sharing is taking place between the projects on specific issues. One area that is receiving attention is In the case of PBCs, 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 PCBs in these areas.
47. The Project will develop regulatory, legal and economic instruments that will be developed to guarantee the adequate sound management and elimination of stock piles. Thus, the envisioned institutional strengthening at State levels can be replicated in close coordination with the private sector that mostly will do the investments needed. Produced knowledge and experiences possess high potential for South-South cooperation
48. Initial contacts have been made with other countries for possible cooperation and collaboration in managing these issues: Costa Rica, Colombia, Ecuador, Brazil, Honduras, Argentina, Uruguay and Paraguay.

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## **V. FEASIBILITY**

i. Cost efficiency and effectiveness:

49. The strategy presented in this project is based on considerations that allow GEF and co-finance resources to offer maximum results. During the PPG phase of this project the project has considered the private-public Mechanism (or a similar approach) to sustainably manage and dispose of PCBs with the implementation of a business model with government participation, supervision and support. Cost efficiency wise, the GEF contribution is essential to trigger and multiply the investment for PCBs destruction as follows. Firstly, the economic resources invested in two activities:

promotion of the private-public services for PCBs elimination and on the inspection campaign, follow up and inspector's training for standard 133 enforcement, will certainly multiply in their effects for PCBs destruction. This will also complement the inspection activities for other hazardous waste

50. Funds invested in supporting the updating/upgrading of the disposal facilities as well as the establishment of new ones, especially through high quality technical assistance, technology implementation, registration support or equipment complementing will also be matched with a fivefold investment from the enterprises. This will expand the services offered to the market and therefore the tendency would be to lower costs, probably at a considerable level considering the operation of the private-public mechanism.
51. Cost effectiveness, is at the core of this project, as being explained above, as the project aims at taking advantage of the market forces (lower costs of destruction thorough the implementation of ISMS in the private-public mechanism). this will allow savings to be obtained, calculated at 30% and up with respect to present market costs, of PCBs management and destruction, that is of the order of over 100 MUS\$, as stated in paragraph 22 above, with less than 5 MUS\$ invested by GEF.
52. Finally, the knowledge products and experience obtained in this GEF/UNDP project, may me of use for replication in some other market economies like Mexico; that may also expand the effect of this "business model" developed and tested and therefore decrease elimination costs in other countries of the region

ii. Risk Management:

53. As per standard UNDP requirements, the Project Manager will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probability are high (i.e. when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported to the GEF in the annual PIR.

**Table 4 - Risk Table**

Project risks					
Description	Type	Impact & Probability	Mitigation Measures	Owner	Status
Owners of hazardous waste disposal facilities do not participate in the project.	<i>Environmental</i>	I = 3 P = 1	The project aims at improving the processes and operation of the facilities which could potentially lead to savings and make it more accesible to owners. In the BAU scenario, limited governmental inspection of the operation takes places. Therefore, with enforcement capacity being increased through the project, more owners of PCBs will be forced to eliminate them.	<i>Project Coordinating Unit and PROFEPA</i>	<i>No change</i>
Lack of coordination / interest among stakeholders around the ISMS.	<i>Operational</i>	I = 3 P = 2	Well-functioning ISMS will potentially generate an increased demand for the services that the companies provide. SEMARNAT will play an active role in the activation of the ISMS. PROFEPA's enforcement activities will give impulse to market, and therefore interest of service suppliers.	<i>Project Coordinating Unit, SEMARNAT and PROFEPA</i>	<i>No change</i>
Null or low government cooperation	<i>Political</i>	I = 4 P = 1	The commitment of the Government of México with the various institutions is currently solid. Final re-affirmation will be ensured by co-financing commitments. Due to the change of administration, this risk is mentioned but is not expected to be confirmed. There will be a close follow up with the new authorities in 2018.	<i>Project Coordinating Unit</i>	<i>No change</i>

Private sector not interested in investing to strengthen their capacities	<i>Financial</i>	I = 4 P = 1	In present scenario, limited governmental inspection of the operation takes places. Therefore, with enforcement capacity being increased through the project, more owners of PCBs will be forced to eliminate them and so more services will be demanded. Additionally, project includes a budget to support improvements in their process equipment.	<i>Project Coordinating Unit</i>	<i>No change</i>
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iii. Social and environmental safeguards:

54. The Social and Environmental Screening (SES) Template has been completed and constitutes the Social and Environmental Screening Report for this project. It has been included as Annex E to the Project Document. The Social and Environmental Screening Template has been filled out using guidance provided in the Social and Environmental Screening Procedure and Toolkit.
55. Environmental and social grievances will be reported to the GEF in the annual PIR.

iv. Sustainability and Scaling Up:

56. The Project presents an innovative approach of establishing and giving impulse to a private-public entity, formed between industries in the same field and market, but with a close collaboration with environmental authorities. It is considered the most appropriate way to advance and assure sustainability of the PCBs destruction activities in the long term, with respect of finding a way to advance with the environmentally sound management of a relatively expensive waste destruction. The project by itself is designed to be self-sustainable, since destruction services will be promoted and supplied by an entity whose objective as a business unit is to destroy PCBs. And also by strengthening regulation enforcement,
57. The scaling up of project is expected to be promoted by the demonstration of the operation of the private-public mechanism. A “business” model will be established and might be replicated without much effort in other countries. Countries that face a similar situation to Mexico can clearly learn by the experience that is being gained in Mexico. It is considered that it will be a first exercise world wise to establish a business model for the institutionalized destruction of a hazardous waste.

## VI. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): Goal 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation					
This project will contribute to the following country outcome included in the UNDAF/Country Programme Document: UNDAF 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					
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)					
This project will be linked to the following output of the UNDP Strategic Plan: Output 1.3: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals and waste.					
	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
<b>Project Objective:</b> Minimize the risk of exposure from PCBs to humans and the environment, while promoting Mexico’s timely compliance with the Stockholm Convention requirements for PCB management, including convention decommissioning and destruction provisions. The project will eliminate 5,000 MT of PCB containing equipment	Metric Ton of PCBs containing equipment eliminated	PCBs inventory (2015), total of 32,000 Mt of PCB contaminated equipment estimated from feasibility study (Phase 1)	2,000	5,000	<ul style="list-style-type: none"> <li>Integrated Services Management System is in place;</li> <li>Program of federal Standard 133 enforcement is implemented;</li> <li>Economic conditions exist to allow SMEs and sensitive sites operators to eliminate PCBs</li> </ul>
	# of project direct beneficiaries: workers in electrical maintenance facilities and sensitive sites users. 200 facilities X 5 people = 1,000 (direct potential contact) + 500 transformers X 1,000 people = 500,000 (potential contact)	0	150,000	501,000	
<b>Component/Outcome 1</b> Strengthening of market bases and of regulations enforcement for sustainable PCBs elimination	Number of PCBs’ elimination proposals submitted to owners by Integrated Services Management System	0	800	2,000	<ul style="list-style-type: none"> <li>Integrated Services Management System is in place;</li> <li>Information about owners is known</li> <li>Program of federal Standard 133 enforcement implemented;</li> </ul>
	Number of responses from PCBs owners, to specific enforcement campaign of federal Standard 133, for PCBs sound management implementation	0	100	250	
	Financing mechanism for PCBs elimination concept developed	0	0	1	
<b>Component/ Outcome 2</b> Improvement of PCBs Management Services and Certification of PCBs	Number of existing facilities for PCBs elimination upgraded and certified	0	1	2	<ul style="list-style-type: none"> <li>Financing conditions for PCBs destruction operators exist;</li> <li>Political conditions exist in Ministry of environment for</li> </ul>
	Number of new facilities for PCBs elimination authorized and	0	1	2	

Destruction Facilities	certified				permits issuing; <ul style="list-style-type: none"> <li>• New process enterprises financing conditions exist</li> </ul>
	Number of existing facilities for electric transformers maintenance certified	13	53	113	<ul style="list-style-type: none"> <li>• Electric transformers maintenance enterprises are aware of Standard 133</li> </ul>
<b>Component/ Outcome 3</b> Destruction of identified stock of PCBs	Metric Ton of PCBs containing equipment eliminated	0	2,000	5,000	<ul style="list-style-type: none"> <li>• Integrated Services Management System is in place;</li> <li>• Program of federal Standard 133 enforcement is implemented;</li> <li>• Economic conditions exist to allow SMEs and sensitive sites operators to eliminate PCBs</li> </ul>
<b>Component/ Outcome 4</b> Capture lessons-learned, monitor project progress and provide adaptive feedback and evaluation	Number of GEF UNDP M&E requirements met and adaptive management applied	0	13	29	<ul style="list-style-type: none"> <li>• Project is executed on time according to planned, mainly steering committee guidance and MTE;</li> <li>• Political support from environment ministry exists</li> </ul>
	Number of documents/reports published of best practices and experience	0	1	5	<ul style="list-style-type: none"> <li>• The Project Coordinating Unit and UNDP CO meet all the GEF M&amp;E requirements and within the time planned.</li> <li>• The project will be able to make use of existing knowledge platforms to spread information gathered.</li> </ul>

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## VII. MONITORING AND EVALUATION (M&E) PLAN

58. The project results as outlined in the project results framework will be monitored annually and evaluated periodically during project implementation to ensure the project effectively achieves these results.
59. Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GEF-specific M&E requirements (as outlined below) will be undertaken in accordance with the GEF M&E policy and other relevant GEF policies.
60. In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including the GEF Operational Focal Point and national/regional institutes assigned to undertake project monitoring. The GEF Operational Focal Point will strive to ensure consistency in the approach taken to the GEF-specific M&E requirements (notably the GEF Tracking Tools) across all GEF-financed projects in the country. This could be achieved for example by using one national institute to complete the GEF Tracking Tools for all GEF-financed projects in the country, including projects supported by other GEF Agencies.

### M&E Oversight and monitoring responsibilities:

61. **Project Manager:** The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP-GEF RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.
62. The Project Manager will develop annual work plans based on the multi-year work plan included in Annex A, including annual output targets to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. gender strategy, KM strategy etc..) occur on a regular basis.
63. **Project Board:** The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.
64. **Project Implementing Partner:** The Implementing Partner is responsible for providing any and all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems.
65. **UNDP Country Office:** The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including the annual GEF PIR, the independent mid-term review and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.
66. The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken

annually; that annual targets at the output level are developed, and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.

67. The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).
68. UNDP-GEF Unit: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.
69. Audit: The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies on NIM implemented projects.<sup>9</sup>

Additional GEF monitoring and reporting requirements:

70. Inception Workshop and Report: A project inception workshop will be held within two months after the project document has been signed by all relevant parties to, amongst others:
  - a) Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project implementation;
  - b) Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
  - c) Review the results framework and finalize the indicators, means of verification and monitoring plan;
  - d) Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP in M&E;
  - e) Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender strategy; the knowledge management strategy, and other relevant strategies;
  - f) Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
  - g) Plan and schedule Project Board meetings and finalize the first year annual work plan.
71. The Project Manager will prepare the inception report no later than one month after the inception workshop. The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board.
72. GEF Project Implementation Report (PIR): The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual GEF PIR covering the reporting period July (previous year) to June (current year) for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR.
73. The PIR submitted to the GEF will be shared with the Project Board. The UNDP Country Office will coordinate the input of the GEF Operational Focal Point and other stakeholders to the PIR as appropriate. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.
74. Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The

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<sup>9</sup> See guidance here: <https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx>

project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

GEF Focal Area Tracking Tools: The following GEF Tracking Tool(s) will be used to monitor global environmental benefit results:

75. The baseline/CEO Endorsement GEF Focal Area Tracking Tool(s) – submitted in Annex D to this project document – will be updated by the Project Manager/Team and shared with the mid-term review consultants and terminal evaluation consultants (not the evaluation consultants hired to undertake the MTR or the TE) before the required review/evaluation missions take place. The updated GEF Tracking Tool(s) will be submitted to the GEF along with the completed Mid-term Review report and Terminal Evaluation report.
76. Independent Mid-term Review (MTR): An independent mid-term review process will begin after the second PIR has been submitted to the GEF, and the MTR report will be submitted to the GEF in the same year as the 3rd PIR. The MTR findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the review process and the MTR report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final MTR report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.
77. Terminal Evaluation (TE): An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terminal evaluation process will begin three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Project Manager will remain on contract until the TE report and management response have been finalized. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center. As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final TE report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The TE report will be available in English for public viewing on the UNDP ERC.
78. The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC). Once uploaded to the ERC, the UNDP IEO will undertake a quality assessment and validate the findings and ratings in the TE report, and rate the quality of the TE report. The UNDP IEO assessment report will be sent to the GEF IEO along with the project terminal evaluation report.
79. Final Report: The project's terminal PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.



**Table 5 - Mandatory GEF M&E Requirements and M&E Budget**

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget <sup>10</sup> (US\$)		Time frame
		GEF grant	Co-financing	
Inception Workshop	UNDP Country Office	USD\$11,000	USD\$10,000	Within two months of project document signature
Inception Report	Project Coordinator	None	None	Within two weeks of inception workshop
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	None	Quarterly, annually
Monitoring of indicators in project results framework	Project Coordinator	USD\$20,000		Annually
GEF Project Implementation Report (PIR)	Project Coordinator, UNDP Country Office and UNDP-GEF team	None	None	Annually
NIM Audit as per UNDP audit policies	UNDP Country Office	USD\$15,000		Annually or other frequency as per UNDP Audit policies
Lessons learned and knowledge generation	Project Manager			Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	Project Manager UNDP CO	None		On-going
Addressing environmental and social grievances	Project Manager UNDP Country Office BPPS as needed	None for time of project manager, and UNDP CO		
Project Board meetings	Project Board UNDP Country Office Project Manager			At minimum annually
Supervision missions	UNDP Country Office	None <sup>11</sup>		Annually
Oversight missions	UNDP-GEF team	None <sup>11</sup>		Troubleshooting as needed
Knowledge management as outlined in Outcome 4	Project Manager	USD\$48,000 (1% of GEF grant)		On-going
GEF Secretariat learning missions/site visits	UNDP Country Office and Project Manager and UNDP-GEF team	None		To be determined.
Mid-term GEF Tracking Tool to be updated by (add name of	Project Manager	USD\$10,000		Before mid-term review mission takes place.

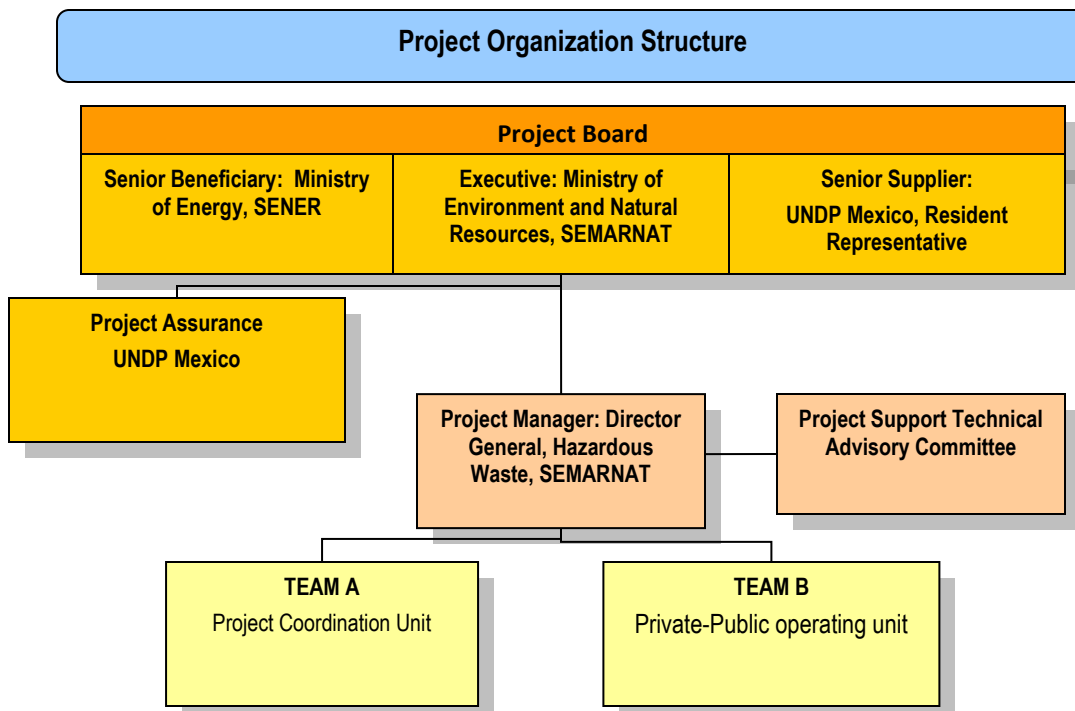
<sup>10</sup> Excluding project team staff time and UNDP staff time and travel expenses.

<sup>11</sup> The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget <sup>10</sup> (US\$)		Time frame
		GEF grant	Co-financing	
national/regional institute if relevant)				
Independent Mid-term Review (MTR) and management response	UNDP Country Office and Project team and UNDP-GEF team	USD\$15,000 -		Between 2 <sup>nd</sup> and 3 <sup>rd</sup> PIR.
Terminal GEF Tracking Tool to be updated by (add name of national/regional institute if relevant)	Project Manager	USD\$10,000		Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE) included in UNDP evaluation plan, and management response	UNDP Country Office and Project team and UNDP-GEF team	USD\$25,000 -		At least three months before operational closure
Translation of MTR and TE reports into English	UNDP Country Office	USD\$5,000		
<b>TOTAL indicative COST</b> Excluding project team staff time, and UNDP staff and travel expenses		USD\$159,000		

## VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

80. Roles and responsibilities of the project's governance mechanism: The project will be implemented following UNDP's national implementation modality, according to the Standard Basic Assistance Agreement between UNDP, the Government of Mexico, and the Country Programme.
81. The Implementing Partner for this project is Ministry of Environment and Natural Resources (SEMARNAT). The Implementing Partner is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. SEMARNAT will be responsible at the highest level for ensuring that project implementation follows national policies and standards, and will represent the project in the annual tripartite reviews. 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.
82. 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 Table 6.
83. The project organization structure is as follows:



**Figure 1 Organization chart**

84. The **Project Board** (PB, also called the Project Steering Committee) is the highest level of analysis and decision making in regards to programming and achievement of results; and is responsible for making by consensus, management decisions when guidance is required by the Project Coordinator, including recommendation for UNDP and/or Implementing Partner approval of the project's Annual Work Plan (AWP), AWP budget and AWP budget revisions. The PB will be established upon project inception. In its first meeting the Project Board will prepare and adopt detailed terms of reference for its functioning.
85. **The Project Board is comprised of the following individuals:** i) Delegate of the Representative of SEMARNAT as Implementing Partner and leader of the project; ii) Delegate of the Ministry of Energy; and iii) the UNDP Resident Representative, as Implementing Agency. The PB will meet twice a year to review project progress and take project-related strategic and critical decisions. The Project Coordinator will be a member of the PB without vote, and will be assisted by the Administrative-Financial Assistant and the M&E Assistant to provide information as may be requested.
86. The PB will be responsible for making executive decisions for the project, in particular when guidance is required by the Project Coordinator. The Project Board will play a critical role in facilitating inter-ministerial coordination, project monitoring and evaluations by quality assuring these processes and products, and using evaluations for performance improvement, accountability and learning. It will ensure that required resources are committed and will arbitrate on any conflicts within the project or negotiate a solution to any problems with external bodies. In addition, it will approve the appointment and responsibilities of the Project Coordinator and any delegation of its Project Assurance responsibilities. Specifically, the PB will be responsible for: (i) approving the annual work plan and budget; (ii) achieving coordination among the various government agencies and key stakeholders; (iii) guiding project implementation to ensure alignment with national and local planning processes and sustainable resource use; (iv) ensuring the participation of key stakeholders in consensus building processes; (v) overseeing the work being carried out by the Project National Director, the Project Coordinator, the Project Technical Team and the institutional technical working groups; (vi) reviewing key reports (such as PIRs); (vii) approve the Mid Term Review and Terminal Evaluation Report and follow up on the managerial responses, and (viii) monitoring progress and the effectiveness of project implementation.
87. The PB will be convened by the Project Coordinator in advance to give the members sufficient time to schedule the meeting and agree on the agenda. The Project Coordinator will prepare minutes of each meeting. Extraordinary meetings of the PB will be convened when deemed necessary and by request of one of its members. Representatives of other

UNDP/GEF RCU offices may participate in PB meetings (without vote). When necessary, the PB will invite key stakeholders to provide background information/technical knowledge on specific themes.

88. In order to ensure UNDP's ultimate accountability for the project's results, PB decisions will be made in accordance with standards that shall ensure management for development results, best value for money, fairness, integrity, transparency and effective international competition. In case consensus cannot be reached within the Board, the final decision shall rest with UNDP. Preliminary terms of reference for the Project Board are contained in Annex F.
89. **Project management:** The National Project Director (NPD) will be appointed by SEMARNAT as Implementing Partner. The NPD will be responsible for orienting and advising the National Project Coordinator on Government policy and priorities. The NPD will be supported by the Technical Committee (see below) and will meet with the Technical Committee on a quarterly basis to review coherence of the project interventions, including results, risks, planning and procurement processes on a quarterly basis. The NPD, designated by SEMARNAT, will be the Director of Hazardous Materials and Risk Activities (*Dirección General de Gestión Integral de Materiales Actividades Riesgosas – DGGIMAR*), he/she will sign and approve procurement of services and goods (based on the tri-monthly plans prepared and approved by the Technical Committee) and will delegate to the Project Coordinator the approval and signature of specific payment requests. The Combined Delivery Report (CDR) will be jointly approved through the Technical Committee in each quarterly meeting and signed by the NPD.
90. The **Project Management Unit (PMU)** will be established in a private office and will consist of a Project Coordinator and an Administrative-Financial Assistant. The Project Coordinator reports to the NPD and the PB. The Project Coordinator shall run the project on a day-to-day basis and his/her prime responsibility shall be to ensure that the project produces the results specified in the project document, to the required standards of quality and within the specified constraints of time and cost. The Project Coordinator will be a person with significant technical experience related to the scope of the project in addition to strong project management skills. S(he) will provide overall technical direction for delivery of key outcomes as part of his/her functions. In addition S(he) will provide managerial leadership for the project, working closely with institutions represented in the PB, the Technical Committee and Working Groups. S(he) will be recruited following UNDP procedures and the successful candidate's time will be partly dedicated to project management functions and partly to technical advice on project outcomes. S/he will be the main project contact person for external communications and will act as Secretary to the PB meetings, as well as other meetings between MAE, MoM and UNDP. Upon project inception s/he will prepare a Project Management and Operations Manual, including responsibilities, procedures and details for smooth and effective implementation, which will be approved by the PB. The Administrative-Financial Assistant will report to the Project Coordinator and provide support in management and administration of the project as well as provide logistical support to technical components of the project. Terms of Reference for the Project Coordinator and the Administrative-Financial Assistant are included in Annex F.
91. The PMU will be responsible for: (i) ensuring professional and timely implementation of the activities and delivery of the reports and other outputs identified in the project document; (ii) coordination and supervision of the activities outlined in the project document; (iii) undertaking necessary organizational arrangements for all project meetings; (iv) contracting of qualified local and international experts who meet formal UNDP/GEF requirements; (v) manage and be responsible for all financial transactions to achieve planned project targets in consultation with the Implementing Partner and the other members of the PB; (vi) establishing effective networking between project stakeholders, specialized international organizations and the donor community; ensure networking among the project's key stakeholders; (vii) review and make recommendations for reports produced under the project; (viii) establish and endorse the thematic areas, with a view to ensuring linkages to national policy goals, relevance, effectiveness and impartiality of the decision making process; and (ix) quarterly follow-up of the Annual Work Plan with the NPD.
92. The **Project Assurance** role will be assumed by the UNDP Country Office, specifically by the Responsible for the Environment and Energy Unit. Additional quality assurance will be provided by the UNDP-GEF Regional Technical Advisor based in Panama as needed and in accordance with the project cycle management services provided by the UNDP GEF unit.
93. As GEF implementing agency, UNDP is ultimately accountable and responsible for the delivery of results, subject to their certification by SEMARNAT, as Implementing Partner. UNDP shall provide project cycle management services as defined by the GEF Council that will include the following:

- a) Providing financial and audit services to the project.
  - b) Overseeing financial expenditures against project budgets.
  - c) Ensuring that activities including procurement and financial services are carried out in strict compliance with UNDP/GEF procedures.
  - d) Ensuring that the reporting to the GEF is undertaken in line with GEF requirements and procedures.
  - e) Facilitate project-learning, exchanges with and outreach within the GEF family.
  - f) Contract the project mid-term and final evaluations and trigger additional reviews and/or evaluations as necessary and in consultation with the project counterparts.
94. Governance role for project target groups: The **Technical Committee** will be chaired by SEMARNAT and will be made up by the delegates of technical areas for POPs management, the UNDP Country Office delegate, the PMU and the project technical teams. SEMARNAT will appoint a chairman to the Technical Committee. The Project Coordinator and the PMU will act as Secretary to the Technical Committee. The Technical Committee will meet on a quarterly basis to review risks, priorities, and compliance with social and environmental safeguards, prepare annual and multi-annual work plans and budgets, as well as the annual and quarterly procurement contracts. In general, it will undertake monitoring and evaluation of the annual and quarterly planning, maintaining an integrated single project approach.
95. UNDP Direct Project Services as requested by Government: The UNDP, as International Agency for this project, will provide project management cycle services for the project as defined by the GEF Council. In addition, the Government of Mexico may request UNDP direct services for specific projects, according to its policies and convenience. The UNDP and the Minister of Environment and Natural Resources of Mexico acknowledge and agree that those services are not mandatory, and will be provided only upon Government request. If requested, the services would follow the UNDP policies on the recovery of direct costs. These services (and their costs) are specified in the Agreement (Annex P and Q). As is determined by the GEF Council requirements, these service costs will be assigned as Project Management Costs, identified in the project budget.
96. Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information: In order to accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy<sup>12</sup> and the GEF policy on public involvement<sup>13</sup>. Logo of SEMARNAT will be included upon approval and following the regulations for their use.
97. Contribution of the Implementing Partner and the main Responsible Party: SEMARNAT will contribute to this initiative through the active participation of their technical staff.

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## IX. FINANCIAL PLANNING AND MANAGEMENT

98. The total cost of the project is USD 25,615,000. This is financed through a GEF or LDCF or SCCF grant of USD 4,800,000, USD and 0 USD in cash co-financing to be administered by UNDP and USD 20,815,000 in parallel co-financing. UNDP, as the GEF Implementing Agency, is responsible for the execution of the GEF resources and the cash co-financing transferred to UNDP bank account only.
99. Parallel co-financing: The actual realization of project co-financing will be monitored during the mid-term review and terminal evaluation process and will be reported to the GEF. The planned parallel co-financing will be used as follows:

Co-financing source	Co-financing type	Co-financing amount	Planned Activities/Outputs	Risks	Risk Mitigation Measures
Government of	Cash and	\$14,000,000	Project Implementing Partner (Lead and	Low risk since	The UNDP

<sup>12</sup> See [http://www.undp.org/content/undp/en/home/operations/transparency/information\\_disclosurepolicy/](http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/)

<sup>13</sup> See [https://www.thegef.org/gef/policies\\_guidelines](https://www.thegef.org/gef/policies_guidelines)

<b>Mexico</b>	<i>In kind</i>		involved in all project's activities). SEMARNAT will be responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources	the resources belong to the national budget.	CO will monitor the Ministry's co-financing contribution to the project.
<b>Sem Tredi, S.A de C.V.</b>	<i>Cash</i>	\$2,400,000	Essential participation in Output 1.2) as part of Private-Public (or similar) Mechanism for Integrated Services Management System for PCBs destruction; in Output 2.1) as likely to be one of the two existing facilities for PCBs elimination or management upgraded and certified and in Output 3.1) to eliminate part of the 5,000 Metric Ton of PCBs contaminated materials from sensitive sites, industry and CFE	Low risk since Sem Tredi, S.A. de C.V. was already planning to make these investments.	The UNDP CO will monitor the Institution's co-financing contribution to the project.
<b>Energy Solutions, S.A de C.V.</b>	<i>Cash</i>	\$2,000,000	Essential participation in Output 1.2) as part of Private-Public (or similar) Mechanism for Integrated Services Management System for PCBs destruction; in Output 2.1) as likely to be one of the two existing facilities for PCBs elimination or management upgraded and certified and in Output 3.1) to partly eliminate 5,000 Metric Ton of PCBs contaminated materials from sensitive sites, industry and CFE ;	Low risk since Energy Solutions, S.A de C.V. was already planning to make these investments.	The UNDP CO will monitor the Institution's co-financing contribution to the project.
<b>Delta Electric S.A de C.V.</b>	<i>Cash</i>	\$2,000,000	Essential participation in Output 1.2) as part of Private-Public (or similar) Mechanism for Integrated Services Management System for PCBs destruction; in Output 2.2) as likely to be one of the two new facilities for PCBs elimination or management upgraded and certified and in Output 3.1) to partly eliminate 5,000 Metric Ton of PCBs contaminated materials from sensitive sites, industry and CFE	Low risk since Delta Electric S.A de C.V.. was already planning to make these investments.	The UNDP CO will monitor the Institution's co-financing contribution to the project.
<b>GMT Laboratorios, S.A de C.V.</b>	<i>In kind</i>	\$300,000	Participation in Output 1.2) as part of Private-Public (or similar) Mechanism for Integrated Services Management System for PCBs destruction; and in Output 2.1) as likely to be one of the two new facilities for PCBs management (retro filling) upgraded and certified	Low risk since GMT Laboratorios, S.A de C.V. was already planning to make these investments.	The UNDP CO will monitor the Institution's co-financing contribution to the project.
<b>CEMGI, S.A de C.V.</b>	<i>In kind</i>	\$60,000	Participation in Output 1.2) as part of Private-Public (or similar) Mechanism for Integrated Services Management System for PCBs destruction; and in Output 2.1) as likely to be one of the	Low risk since CEMGI, S.A de C.V. was already planning to	The UNDP CO will monitor the Institution's co-financing

			two new facilities for PCBs management (retro filling) upgraded and certified	make these investments.	contribution to the project.
<b>United Nations Development Programme</b>	<i>In kind</i>	\$55,000	Overall coordination, support and project oversight as well as UNDPs consultants and services.	Low risk since these are activities already performed by UNDP	The UNDP CO will monitor the co-financing contribution to the project.

100. Budget Revision and Tolerance: As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board. Should the following deviations occur, the Project Manager and UNDP Country Office will seek the approval of the UNDP-GEF team as these are considered major amendments by the GEF:
- Budget re-allocations among components in the project with amounts involving 10% of the total project grant or more;
  - Introduction of new budget items/or components that exceed 5% of original GEF allocation.
101. Any over expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).
102. Refund to Donor: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the UNDP-GEF Unit in New York.
103. Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. On an exceptional basis only, a no-cost extension beyond the initial duration of the project will be sought from in-country UNDP colleagues and then the UNDP-GEF Executive Coordinator.
104. Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP.
105. Financial completion: The project will be financially closed when the following conditions have been met:
- The project is operationally completed or has been cancelled;
  - The Implementing Partner has reported all financial transactions to UNDP;
  - UNDP has closed the accounts for the project;
  - UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).
106. The project will be financially completed within 12 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

## X. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Atlas Proposal or Award ID:	00084933	Atlas Primary Output Project ID:	00092730
Atlas Proposal or Award Title:	Environmentally Sound Management and Destruction of PCBs in Mexico: Second Phase		
Atlas Business Unit	MEX10		
Atlas Primary Output Project Title	FSP - Env. Sound Mngmnt and Destruction of PCBs Phase 2		
UNDP-GEF PIMS No.	5479		
Implementing Partner	Ministry of Environment and Natural Resources of Mexico		

GEF Component/Atlas Activity	Responsible Partner	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	See Budget Note
	(Atlas Implementing Agent)											
Component 1: Strengthening of market bases and of regulations enforcement for sustainable PCBs elimination	SEMARNAT	62000	GEF	71400	Contractual Services - individuals	63,000	110,000	110,000	110,000	110,000	503,000	A
				71600	Travel		7,000	7,000	7,000	5,000	26,000	B
				72100	Contractual Services - companies	60,000	210,000	80,000	80,000	80,000	510,000	C
				72200	Equipment and Furniture	5,000					5,000	D



				74500	Miscellaneous	10,000	10,000	15,000	10,000	10,000	55,000	E
				75700	Training, workshop, and conferences	10,000	20,000	15,000	5,000	5,000	55,000	F
				<b>Subtotal</b>		<b>148,000</b>	<b>357,000</b>	<b>227,000</b>	<b>212,000</b>	<b>210,000</b>	<b>1,154,000</b>	
<b>Component 2: Improvement of PCB Management Services and Certification of PCB Destruction Facilities</b>	SEMARNAT	62000	GEF	71400	Contractual Services - individuals	10,000	25,000	25,000	25,000	15,000	100,000	G
				72100	Contractual Services - companies	100,000	150,000	150,000	150,000	4,000	554,000	H
				72200	Equipment and Furniture	100,000	300,000	300,000			700,000	I
				75700	Training, workshop, and conferences		5,000	5,000			10,000	J
				<b>Subtotal</b>		<b>210,000</b>	<b>480,000</b>	<b>480,000</b>	<b>175,000</b>	<b>19,000</b>	<b>1,364,000</b>	
<b>Component 3: Destruction of an identified stock of PCBs</b>	SEMARNAT	62000	GEF	71400	Contractual Services - individuals	10,000	25,000	25,000	25,000	30,000	115,000	K

				71600	Travel		10,000	10,000	5,000	5,000	30,000	L
				72100	Contractual Services - companies	190,000	300,000	330,000	500,000	400,000	1,720,000	M
				<b>Subtotal</b>		<b>200,000</b>	<b>335,000</b>	<b>365,000</b>	<b>530,000</b>	<b>435,000</b>	<b>1,865,000</b>	
<b>Component 4: Capture lessons learned, monitor project progress and provide adaptive feedback and evaluation</b>	SEMARNAT	62000	GEF	71200	International consultants			20,000		30,000	50,000	N
				72100	Contractual Services - companies			10,000		10,000	20,000	O
				74200	Audio Visual & Print Prod Costs			15,000	20,000	25,000	60,000	P
				75700	Training, workshop, and conferences	10,000	10,000	5,000	5,000	20,000	50,000	Q
				<b>Subtotal</b>		<b>10,000</b>	<b>10,000</b>	<b>50,000</b>	<b>25,000</b>	<b>85,000</b>	<b>180,000</b>	
<b>Project Management</b>	SEMARNAT	62000	GEF	71400	Contractual Services - individuals	21,000	24,000	25,000	25,000	20,000	115,000	R

				72200	Equipment and Furniture	2,000						2,000	S
				72400	Communication & Audio Visual Equipment	2,000						2,000	T
				72500	Supplies	1,000	999	999	999	999		4,996	U
				74200	Audio Visual & Print Prod Costs			3,000	5,000	5,000		13,000	V
				75700	Training, workshop, and conferences	10,000	3,000	4,000	4,000	10,000		31,000	W
				74596	Costs for UNDP Country Office to provide direct support services	15,370	17,450	14,668	15,900	5,616		69,004	X
				<b>Subtotal</b>		<b>51,370</b>	<b>45,449</b>	<b>47,667</b>	<b>50,899</b>	<b>41,615</b>		<b>237,000</b>	
				<b>GRAND TOTAL</b>		<b>619,370</b>	<b>1,227,449</b>	<b>1,169,667</b>	<b>992,899</b>	<b>790,615</b>		<b>4,800,000</b>	

<b>Budget Notes:</b>		
<b>No.</b>	<b>Budget Line</b>	<b>Component 1: Develop institutional capacities and strengthen the regulatory and policy framework to address emerging POPs issues</b>
A	71400	National consultants engaged to develop following: in (O1.1) supervision of inventory ratification (\$23,000); in (O1.2) operation of ISMS office (\$190,000); in (O1.3) supervision of development of financing mechanism (\$25,000); in (O 1.4) on supervision of inspection of enforcement program (\$100,000 ) and on the trained consultants that will support enforcement inspection campaign (\$165,000), all at 1,300 US\$/month for a total of 50 months, with exception of office head in O1.2, which is at 2,000 US\$/month.
B	71600	Travel costs for federal inspectors to participate in inspection enforcement activities (O 1.4)
C	72100	Contractual services to develop following: in (O1.1) to conduct inventory ratification (\$100,000); in (O1.2) to develop legal covenant of society that will operate (\$30,000) and to develop promotion campaign (\$140,000); in O(1.3) to develop financing mechanism (80,000); and in (O1.4) for promotion, for communication and follow up of enforcement campaign (\$160,000)
D	72200	Standard office and computing equipment
E	74500	Miscellaneous charges for the duration of project period
F	75700	Training workshops, seminars and meetings conducted for in Outputs 1.2 and 1.4
<b>No.</b>	<b>Budget Line</b>	<b>Component 2: Improvement of PCBs Management Services and Certification of PCBs Destruction Facilities</b>
G	71400	National consultants to provide supervision in (O2.1 and O2.2) of upgrading and certification of PCBs destruction enterprises (\$100,000)
H	72100	Contractual services in (O 2.1) to provide technical assistance in existing destruction facilities upgrading (\$307,000); in (O 2.2) provide technical assistance for assessment for PCB elimination upgrade (\$80,000); (O 2.3) to provide technical assistance to certify 200 maintenance workshops (\$80,000) (O 2.1 and O 2.2); and assistance for liaison with destruction companies (\$40,000)
I	72200	Equipment for (O 2.2) technical assistance in new destruction facilities establishment and upgrading (\$307,000); and in (O 2.1 and O 2.2) and in (O 2.1) upgrade of emissions control systems and the exhaust gases post-combustion conditions (\$393,000)
J	75700	Training workshops, seminars and meetings conducted for in Output 2.3
<b>No.</b>	<b>Budget Line</b>	<b>Component 3: Destruction of an identified stock of PCBs</b>
K	71400	National consultants in (O 3.1) for supervision of PCBs containing materials destruction (\$115,000);
L	71600	Travel costs for supervision of PCBs containing materials destruction (\$30,000)
M	72100	Contractual services in (O 3.1) for elimination/destruction of PCBs containing materials (\$1,720,000)
<b>No.</b>	<b>Budget Line</b>	<b>Component 4: Capture lessons-learned, monitor project progress and provide adaptive feedback and evaluation</b>
N	71200	International consultants in (O 4.1) to conduct midterm and final evaluation of project (\$50,000);
O	72100	Contractual services to (O 4.1) to financially audit project (\$20,000)

P	74200	Printing and audio-visual costs for lessons learned dissemination & south-south Cooperation. This includes translation costs from Spanish to English (\$5,000 year 3 and \$5,000 year 5 / MRT and Final evaluation)
Q	75700	Training workshops, seminars and meetings for (O 4.2): inception workshop, annual presentations with steering committee
<b>No.</b>	<b>Budget Line</b>	<b>Project Management</b>
R	71400	National consultants and project staff to undertake day-to-day project implementation and management activities for a total of 575 workdays at \$200/day
S	72200	Standard office and computing equipment
T	72400	Payment for communication equipment of PMU during field visits
U	72500	Basic office supplies for duration of project period
V	74200	Standard project communication strategy
W	75700	Training workshops, seminars and meetings to strengthen project management capabilities
X	74596	Direct Project Costs

Summary of cofinancing

Donor	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Total
<b>Government of Mexico</b>	\$ 2,800,000	\$ 2,800,000	\$ 2,800,000	\$ 2,800,000	\$ 2,800,000	\$ 14,000,000
<b>Sem Tredi, S.A de C.V.</b>	\$ -	\$ 1,200,000	\$ 1,200,000	\$ -	\$ -	\$ 2,400,000
<b>Energy Solutions, S.A de C.V.</b>	\$ -	\$ 1,000,000	\$ 1,000,000	\$ -	\$ -	\$ 2,000,000
<b>Delta Electric S.A de C.V.</b>		\$ 1,000,000	\$ 1,000,000			\$ 2,000,000
<b>GMT Laboratorios, S.A de C.V.</b>		\$ 150,000	\$ 150,000			\$ 300,000
<b>CEMGI, S.A de C.V.</b>		\$ 30,000	\$ 30,000			\$ 60,000
<b>United Nations Development Programme</b>	\$ 15,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 55,000



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## **XI. LEGAL CONTEXT**

107. 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.
108. 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.
109. 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.
110. 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.
111. 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.
112. 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.

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## **XII. ANNEXES**

- A. Multi year Workplan
- B. Monitoring Plan
- C. Evaluation Plan
- D. GEFSEC & STAP Comments
- E. GEF Tracking Tool (s) at baseline
- F. Terms of Reference for Project Board, Project Manager, Chief Technical Advisor and other positions as appropriate
- G. UNDP Social and Environmental and Social Screening Template (SESP)
- H. UNDP Project Quality Assurance Report
- I. UNDP Risk Log
- J. Results of the capacity assessment of the project implementing partner and HACT micro assessment
- K. LOA with the Government
- L. Detailed overview of DPC Costs
- M. Cofinancing letters



## Annex A. Multi Year Work Plan

Task	Outputs/Activities	Resp Party	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
1.1	Ratification of Inventories of Federal Electricity Company (CFE), private industry and public sensitive sites	PT, PSC																				
1.2	Establishment and operation of Mechanism for Management System for PCBs destruction at national scale	PT, NC																				
1.3	Development and assessment of Financing mechanism concept for PCBs elimination	NC, IC																				
1.4	Establishment of Enforcement Program of federal Standard 133 for PCBs sound management	PT, NC																				
2.1	Upgrading and certification of two existing facilities for PCBs elimination or management	PT, PSC																				
2.2	Establishment and certification of two new facilities for PCBs elimination or management	PT, PSC																				
2.3	Certification of two hundred Electrical Maintenance facilities	PT, PSC																				
3.1	Elimination of 5,000 Metric Ton of PCBs contaminated materials from sensitive sites, industry and CFE	PT, PSC																				
4.1	Application of M&E and adaptive management in response to needs and mid-term evaluation findings	PT, NC, IC																				
4.2	Capture and dissemination of results and best practices in knowledge management products	PT, NC, IC																				

NC = National Consultants  
IC = International Consultants

PT = Project Team  
PSC = Private Sector Company

## Annex B. Monitoring Plan

The Project Coordinator will collect results data according to the following monitoring plan.

Monitoring	Indicators	Description	Data source/Collection Methods	Frequency	Responsible for data collection	Means of verification	Assumptions and Risks
<b>Project Objective:</b> Minimize the risk of exposure from PCBs to humans and the environment, while promoting Mexico's timely compliance with the Stockholm Convention requirements for PCB management, including convention decommissioning and destruction provisions. The project will eliminate 5,000 MT of PCB containing equipment	<b>Indicator 1</b> Metric Ton	Metric Ton of PCBs containing equipment eliminated	Obtained from reports to/from SEMARNAT on official destruction of PCBs	Annually Reported in DO tab of the GEF PIR	Project Coordinator	Printouts of SEMARNAT's official reports	It is assumed that copies of the reports will be made available to the Project Coordinator.
	<b>Indicator 2</b> # of project direct beneficiaries	# of project direct beneficiaries: workers in electrical maintenance facilities and sensitive sites users.	Obtained from reports of good practices in PCBs handling from management and maintenance enterprises. Reports of the number of sensitive sites in which PCBs contaminated transformers have been eliminated	Annually Reported in DO tab of the GEF PIR	Project Coordinator	Printouts of reports	It is assumed that reports will be emitted by enterprises.
<b>Outcome 1</b> Strengthening of market bases and of regulations enforcement for sustainable PCBs elimination	<b>Indicator 3</b> Number of proposals submitted	Number of PCBs' elimination proposals submitted to owners by Integrated Services Management System	Obtained from reports of Private-public entity operation.	Annually Reported in DO tab of the GEF PIR	Project Coordinator	Printouts of reports and of annual meetings of Technical Advisory Committee	It is assumed that reports will be regularly produced
	<b>Indicator 4</b> Number of responses to campaign	Number of responses from PCBs owners, to specific enforcement campaign of federal Standard 133,	Obtained from reports of PROFEPA's inspection registers.	Annually Reported in DO tab of the GEF PIR	Project Coordinator	Printouts of PROFEPA's official reports	It is assumed that copies of the reports will be made available to the Project Coordinator.

		for PCBs sound management implementation					
	<b>Indicator 5</b> Number of financing mechanism	Financing mechanism for PCBs elimination Financing mechanism for PCBs elimination concept developed	Project's Consultant's reports of contracts	Annually Reported in DO tab of the GEF PIR	Project Coordinator	Copy of report	
<b>Outcome 2</b> Improvement of PCBs Management Services and Certification of PCBs Destruction Facilities	<b>Indicator 6</b> Number of facilities	Number of existing facilities for PCBs elimination upgraded and certified	Obtained from reports to/from SEMARNAT on facilities upgrade and from third party certificates of compliance	Annually Reported in DO tab of the GEF PIR	Project Coordinator	Copy of report and of certificates	It is assumed that copies of the reports will be made available to the Project Coordinator
	<b>Indicator 7</b> Number of facilities	Number of new facilities for PCBs elimination authorized and certified	Obtained from reports to/from SEMARNAT on facilities authorized and from third party certificates of compliance	Annually Reported in DO tab of the GEF PIR	Project Coordinator	Copy of report and of certificates	It is assumed that copies of the reports will be made available to the Project Coordinator
	<b>Indicator 8</b> Number of facilities	Number of existing facilities for electric transformers maintenance certified	Obtained from reports from third party certification reports	Annually Reported in DO tab of the GEF PIR	Project Coordinator	Copy of report and of certificates	It is assumed that copies of the reports will be made available to the Project Coordinator
<b>Outcome 3</b> Destruction of identified stock of PCBs	<b>Indicator 9</b> Metric Ton	Metric Ton of PCBs containing equipment eliminated	Obtained from reports to/from SEMARNAT on official destruction of PCBs	Annually Reported in DO tab of the GEF PIR	Project Coordinator	Printouts of SEMARNAT's official reports	It is assumed that copies of the reports will be made available to the Project Coordinator.
<b>Outcome 4</b> Capture lessons-learned, monitor project progress and provide adaptive feedback and evaluation	<b>Indicator 11</b> Number of requirements met	Number of GEF UNDP M&E requirements met and adaptive management applied	Annual Project Reports and Technical Advisory Committee meetings	Annually Reported in DO tab of the GEF PIR	Project Coordinator	Copy of reports and minutes/presentations	
	<b>Indicator 12</b> Number of documents/reports	Number of documents/reports published of best practices and experience	Obtained from Project library	Annually	Project Coordinator	Printed/electronic copy of documents	
<b>Mid-term GEF Tracking Tool</b>	N/A	N/A	Standard GEF Tracking Tool	After 2 <sup>nd</sup> PIR		Completed GEF Tracking Tool	

(if FSP project only)			available at <a href="http://www.thegef.org">www.thegef.org</a> Baseline GEF Tracking Tool included in Annex.	submitted to GEF			
<b>Terminal GEF Tracking Tool</b>	N/A	N/A	Standard GEF Tracking Tool available at <a href="http://www.thegef.org">www.thegef.org</a> Baseline GEF Tracking Tool included in Annex.	After final PIR submitted to GEF		Completed GEF Tracking Tool	
<b>Mid-term Review (if FSP project only)</b>	N/A	N/A	To be outlined in MTR inception report	Submitted to GEF same year as 3 <sup>rd</sup> PIR	Independent evaluator	Completed MTR	
<b>Environmental and Social risks and management plans, as relevant.</b>	N/A	N/A	Updated SESP and management plans	Annually	Project Manager UNDP CO	Updated SESP	

## Annex C. Evaluation Plan

Evaluation Title	Planned start date Month/year	Planned end date Month/year	Included in the Country Office Evaluation Plan	Budget for consultants <sup>14</sup>	Other budget (i.e, travel, site visits etc...)	Budget for translation
Independent Mid-term Review (MTR)	September 2020	November 2020	Yes	USD 38,000 (Int. consultant)	-	USD 5,500
<b>Terminal Evaluation</b>	October 2022 3 months before operation closure	December 2023 To be submitted to GEF within three months of operational closure	Yes	USD 52,000 (Int. Consultants)	-	USD 5,500
<b>Total evaluation budget</b>				101,000 USD		

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<sup>14</sup> The budget will vary depending on the number of consultants required (for full size projects should be two consultants); the number of project sites to be visited; and other travel related costs. Average # total working days per consultant not including travel is between 22-25 working days.

## Annex D. GEFSEC & STAP Comments



UNDP\_GEF5479\_PC  
B2\_MEX\_AnnexD\_GE

## Annex E. GEF Tracking Tool (s) at baseline



UNDP\_GEF5479\_PC  
B2\_MEX\_AnnexE\_Tra

## Annex F. Terms of Reference



UNDP\_GEF5479\_PC  
B2\_MEX\_AnnexF\_Tol

## Annex G. UNDP Social and Environmental and Social Screening Template (SESP)



UNDP\_GEF5479\_PC  
B2\_MEX\_AnnexG\_SE

## Annex H. UNDP Project Quality Assurance Report

## Annex I. UNDP Risk Log



UNDP\_GEF5479\_PC  
B2\_MEX\_AnnexI\_Risl

## Annex J. Results of the capacity assessment of the project implementing partner

## Annex K. LOA with the Government

### **CARTA DE ACUERDO ENTRE EL PROGRAMA DE LAS NACIONES UNIDAS PARA EL DESARROLLO (PNUD) Y EL GOBIERNO PARA LA PRESTACIÓN DE SERVICIOS DE APOYO**

Estimado,

César Murillo Juárez  
Director general  
Gestión Integral de Materiales y Actividades Riesgosas  
Secretaría de Medio Ambiente y Recursos Naturales

1. Se hace referencia a las consultas entre funcionarios del Gobierno de México (en adelante, “el Gobierno”) y funcionarios del PNUD respecto de la prestación de servicios de apoyo por parte de la oficina del PNUD en el país para los programas y proyectos gestionados a nivel nacional. Mediante el presente acuerdo, el PNUD y el Gobierno acuerdan que la oficina del PNUD en el país puede prestar tales servicios de apoyo, a solicitud del Gobierno, a través de su institución designada en el documento del proyecto pertinente, según se describe más adelante.
2. La oficina del PNUD en el país puede prestar servicios de apoyo para ayudar en las necesidades de información y pago directo. Al prestar dichos servicios de apoyo, la oficina del PNUD en el país verificará que la capacidad del Gobierno (Asociado en la Implementación) sea reforzada para que pueda llevar a cabo dichas actividades de forma directa. Los costos en que incurra la oficina del PNUD en el país en la prestación de dichos servicios de apoyo serán recuperados del presupuesto administrativo de la oficina.
3. La oficina del PNUD en el país podrá prestar, a solicitud del Asociado en la Implementación, los siguientes servicios de apoyo para las actividades del proyecto:
  - (a) Identificación y/o contratación de personal para el proyecto;
  - (b) Identificación y facilitación de actividades de capacitación;
  - (a) Adquisición de bienes y servicios;
4. La adquisición de bienes y servicios y la contratación del personal para el proyecto por parte de la oficina del PNUD en el país se realizará de acuerdo con el reglamento, reglamentación, políticas y procedimientos del PNUD. Los servicios de apoyo descritos en el párrafo 3 anterior se detallarán en un anexo al documento del proyecto, en la forma prevista en el Apéndice del presente documento. Si las necesidades de servicios de apoyo de la oficina del país cambiaran durante la vigencia de un proyecto, el anexo al documento del proyecto se revisará de común acuerdo entre el representante residente del PNUD y el Asociado en la Implementación.
5. Las disposiciones pertinentes del Acuerdo sobre Normas Especiales entre Gobierno de México y el Programa de las Naciones Unidas para el Desarrollo firmado en México (SSA), incluidas las disposiciones acerca de la responsabilidad y privilegios e inmunidades, se aplicarán a la prestación de tales servicios de apoyo. El Gobierno conservará la responsabilidad general por el proyecto gestionado a nivel nacional a través de su Asociado en la Implementación. La responsabilidad de la oficina del PNUD en el país por la prestación de los servicios de apoyo aquí descritos se limitará a la prestación de aquellos que se detallen en el anexo al documento del proyecto.
6. Cualquier reclamación o controversia que surgiera como resultado o en relación con la prestación de servicios de apoyo por parte de la oficina del PNUD en el país en conformidad con esta carta será gestionada de acuerdo con las disposiciones pertinentes del SBAA.
7. La forma y el método en que la oficina del PNUD en el país puede recuperar los gastos incurridos en la prestación de los servicios de apoyo descritos en el párrafo tercero de este Acuerdo serán especificados en el anexo al documento del proyecto.

8. La oficina del PNUD en el país presentará informes sobre la marcha de los servicios de apoyo prestados e informará acerca de los gastos reembolsados en la prestación de dichos servicios, según se requiera.
9. Cualquier modificación a estos acuerdos se efectuará por mutuo acuerdo escrito de las partes contractuales.
10. Si usted está de acuerdo con las disposiciones enunciadas precedentemente, sírvase firmar y devolver dos copias firmadas de esta carta a esta oficina. Una vez firmada, esta carta constituirá el acuerdo entre su Gobierno y el PNUD en los términos y condiciones establecidos para la prestación de servicios de apoyo por la oficina del PNUD en el país a programas y proyectos gestionados a nivel nacional.

Atentamente,

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Firmado en nombre y representación del PNUD  
*Antonio Molpeceres*  
*Representante Residente*

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Por el Gobierno  
*César Murillo Juárez/Director General DGGIMAR*  
**[FECHA]**

Anexo

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**DESCRIPCIÓN DE LOS SERVICIOS DE APOYO DE LA OFICINA DEL PNUD EN EL PAÍS**

1. Se hace referencia a las consultas entre la **Secretaría de Medio Ambiente y Recursos Naturales - SEMARNAT**, la institución designada por el Gobierno de México y funcionarios del PNUD respecto de la prestación de servicios de apoyo por parte de la oficina del PNUD en el país al proyecto gestionado a nivel nacional *Environmentally Sound Management and Destruction of PCBs in Mexico: Second Phase* (5479).
2. De acuerdo con las disposiciones de la carta de acuerdo firmada el **[insertar la fecha del acuerdo]** y el *Environmentally Sound Management and Destruction of PCBs in Mexico: Second Phase*, la oficina del PNUD en el país prestará los servicios de apoyo al Proyecto que se describen a continuación.
3. Servicios de apoyo que se prestarán:

Servicios de apoyo (descripción)	Calendario de la prestación de los servicios de apoyo	Costo de la prestación de tales servicios de apoyo para el PNUD (cuando proceda)	Método de reembolso del PNUD (cuando proceda)
Pagos, desembolso y otras transacciones financieras	Dentro de los plazos del proyecto	USD \$27,579.69	Cargo directo al presupuesto



Viajes (autorizaciones y F10)	Dentro de los plazos del proyecto	USD \$4,973.95	Cargo directo al presupuesto
Contratación de consultores	Dentro de los plazos del proyecto	USD \$25,869.90	Cargo directo al presupuesto
Procesos de contratación CAP	Dentro de los plazos del proyecto	USD \$6,232.16	Cargo directo al presupuesto
Procesos de contratación con CAP	Dentro de los plazos del proyecto	USD \$2,904.98	Cargo directo al presupuesto
Transferencia de inventario	Dentro de los plazos del proyecto	USD \$1,443.00	Cargo directo al presupuesto
Total		USD \$69,003.68 *	

\*Costo aproximado

#### 4. Descripción de las funciones y responsabilidades de las Partes involucradas:

El proyecto se llevará a cabo mediante la modalidad de Ejecución Nacional del PNUD (NIM). La **Secretaría de Medio Ambiente y Recursos Naturales - SEMARNAT**, actúa como socio de implementación nacional, y con el apoyo del PNUD como organismo de ejecución del FMAM. La SEMARNAT será la responsable de la dirección y la gestión del proyecto y supervisar el cumplimiento de los planes de trabajo. Dentro del IDEAM se creará una Unidad de Gestión-ejecución del proyecto responsable de las actividades diarias, de la supervisión en coordinación con PNUD.

La unidad de gestión y ejecución del proyecto podrá llevar a cabo la contratación y contratos para todas las compras de menos de **10.000 USD**. Estas operaciones deberán cumplir con las normas y procedimientos de PNUD.

### Annex L. Detailed overview of DPC Costs



UNDP\_GEF5479\_PC  
B2\_MEX\_AnnexL\_DP

### Annex M. Cofinancing letters



UNDP\_GEF5479\_PC  
B2\_MEX\_AnnexM\_Co