



# REQUEST FOR CEO APPROVAL

PROJECT TYPE: Medium-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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## PART I: PROJECT INFORMATION

Project Title: Environmentally sound management of polychlorinated biphenyl (PCB) - containing equipment and wastes and upgrade of technical expertise in Bolivia			
Country(ies):	The Plurinational State of Bolivia	GEF Project ID: <sup>1</sup>	5646
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	130175
Other Executing Partner(s):	Ministry of Environment and Water	Submission Date:	10-01-2014
GEF Focal Area (s):	Persistent Organic Pollutants	Project Duration(Months)	36 months
Name of Parent Program (if applicable):		Project Agency Fee (\$):	190,000
➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/>			

## A. FOCAL AREA STRATEGY FRAMEWORK<sup>2</sup>

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
CCM-1 CHEM-1	Outcome 1.1: Production and use of controlled POPs chemicals phased out	Output 1.1.1 Countries receiving GEF support to phase out the production or use of controlled POPs (other than new POPs)	GEF TF	2,000,000	9,696,435
(select) (select)			(select)	0	0
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
Total project costs				2,000,000	9,696,435

## B. PROJECT FRAMEWORK

<b>Project Objective: To strengthen national capacities for the environmentally sound management (ESM) of PCBs, including disposal of up to 400 tones of PCB and related wastes and reduction / elimination of PCB releases from serviced electrical equipment at workshops and interim storage locations, to avoid cross contamination of electrical equipment and to protect human health and the environment</b>						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
1. Regulatory and institutional strengthening and awareness raising for the implementation of PCB related	TA	Regulatory and institutional capacities for environmentally sound management of PCBs strengthened	1.1. Institutional representatives to the Project Steering Committee, and representatives to the Technical Committee	GEF TF	200,000	1,859,576

<sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>2</sup> Refer to the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.  
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measures of the SC on POPs			appointed; 1.2. Legal Framework drafted; 1.3. Environmental Technical Government staff (inspectors and regulators), authorities of the different sectors trained to implement the legislation adopted; 1.4. Society awareness raising and training conducted.			
2. Environmentally sound management (ESM) of PCB-containing electrical equipment and waste	Inv	Environmental Management System (EMS) of PCBs established	2.1. Methods for PCBs analysis adopted and laboratories accredited for PCB analysis; 2.2. ESM system for control and disposal of PCBs established, including a guide on mitigation measures on environment, safety and occupational health, and relevant staff trained; 2.3. In-depth inventory of major owners of PCB-contaminated equipment and development of the national management plan for PCB disposal; 2.4. PCB disposal plan implemented, PCBs phased out and long-term strategy developed;	GEF TF	1,550,000	6,936,859
3. Project management and monitoring and evaluation	TA	Project management and monitoring and evaluation established	3.1 Monitoring and evaluation framework designed and implemented according to GEF procedures	GEF TF	100,000	200,000
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					1,850,000	8,996,435
Project management Cost (PMC) <sup>3</sup>				(select)	150,000	700,000
<b>Total project costs</b>					<b>2,000,000</b>	<b>9,696,435</b>

<sup>3</sup> PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

### C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
National Government	Ministry of Environment, Biodiversity, Climate Change and Forest Development Management	In-kind	302,033
National Government	Ministry of Hydrocarbons and Energy	In-kind	28,000
National Government	Mutun Steel Company	Cash	1,434,009
National Government	National Electricity Company of Bolivia (ENDE) through 7 subsidiaries	Cash	6,272,195
National Government	Electricity Services of Tarija (SETAR)	Cash	370,198
GEF Agency	UNIDO	Cash	90,000
Others	Minera San Cristobal	In-kind	1,200,000
(select)		(select)	
(select)		(select)	
<b>Total Co-financing</b>			<b>9,696,435</b>

### D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY<sup>1</sup>

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) <sup>2</sup>	Total c=a+b
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
<b>Total Grant Resources</b>				<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup> In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

<sup>2</sup> Indicate fees related to this project.

### F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	134,500	0	134,500
National/Local Consultants	188,500	969,000	1,157,500

### G. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? No

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

## PART II: PROJECT JUSTIFICATION

### **A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF<sup>4</sup>**

A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

1. The project design under this request for CEO approval is fully aligned with the approved PIF, with improvements to further strengthen and elaborate the project document as a basis for successful project implementation.
2. The Plurinational State of Bolivia ratified the Stockholm Convention (SC) on Persistent Organic Pollutants (POPs) in 2003 and submitted its first National Implementation Plan (NIP) to the Conference of Parties (COP) in September 2005. The NIP outlines the roadmap for the national management of the POPs and includes the preliminary inventory of the initially listed POPs, a prioritization of the national POPs issues and action plans for future implementation of the Convention. The NIP identified the establishment of an Environmental Management System for the environmentally sound management (ESM) of polychlorinated biphenyls (PCBs) as one of the top national priorities for the elimination and/or reduction of POPs. The SC sets the goal of phasing-out the use of equipment containing PCBs (e.g. transformers, capacitors or other receptacles containing liquid stocks) by year 2025, and of treating and eliminating the recovered PCBs and the ESM of PCB wastes by year 2028. This medium-sized project (MSP) would be the first post-NIP project executed in Bolivia under cooperation with the Stockholm Convention Unit at the Ministry of Environment and Water.
3. Meeting the requirements set under the SC and addressing the national priorities for the ESM of PCBs, requires the development and implementation of the following instruments and tools:
4. (i) Action plan for the establishment of ESM of PCB-containing electrical equipment and waste:
  - Production, use, labeling, storage and phase out plan for PCBs set.
  - Handling, identification, use and database for the PCB developed.
  - Laboratory capacity for the analysis of PCB strengthened.
5. (ii) Action plan for regulatory and institutional strengthening for the implementation of PCB related measures of the SC on POPs:
  - Contaminated sites identified, and strategies for information exchange, education, communication and sensitization set.
6. (iii) Action plan for awareness raising and public information:
  - Staff and PCB workers of different sectors sensitized and trained.

In line with Article 7 of the SC, Bolivia is currently reviewing and updating its first NIP to include the additional POPs listed in the Convention under the UNIDO-GEF funded project “Enabling activities to review

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<sup>4</sup> For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter “NA” after the respective question.  
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and update the national implementation plan under the Stockholm Convention on Persistent Organic Pollutants” (GEF ID 5219). Results of the ongoing update of the PCB inventory and additional stakeholder consultations will help improve conditions for starting implementation of this medium-sized project (MSP).

7. The most important achievement during the PPG phase has been a greater stakeholder involvement and a renewed interest by the Government, as expressed by the confirmed co-financing that exceeds the indicative amount proposed in the PIF by 73% (US\$9'606,000 now confirmed in contrast to US\$5'590,000 indicated in the PIF) and the wider range of stakeholder due to the inclusion of the mining and steel-making sectors. The PPG work also focused on creating public awareness on the importance of the ESM of PCB and the fulfillment of the main project goal, which is to reduce the amount of existing national PCB-containing electrical equipment and related wastes. In addition, a proper methodology for the inventory of PCBs was introduced through national workshops that further strengthened the commitment and interest of the main project stakeholders in the proper management and final disposal of the PCBs.

#### A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities.

8. The project is consistent with GEF-5 Chemicals Focal Area objective CHEM-1 "Phase out POPs and reduce POPs releases"; Outcome 1.4 "POPs waste prevented, managed and disposed of and POPs contaminated sites managed in an environmentally sound manner"; Output 1.4.1 "PCB management plans under development and implementation".
9. To achieve this GEF-5 objective, the project will establish an ESM of PCBs and mobilize funds to be invested on the safe control, management and disposal of PCBs and PCB-containing equipment and wastes in the country. The Ministry of Environment, Biodiversity, Climate Change and Forest Development Management and the Ministry of Hydrocarbons and Energy have worked with UNIDO and the project team to ensure adequate participation according to adequate eligibility criteria. Towards this, they approached key partner companies that have shown previous activity and commitment on PCBs elimination, including: the National Electricity Company of Bolivia (ENDE) that involved 7 of its subsidiaries; Electricity Services of Tarija (SETAR); the Mutun Steel Company, and Minera San Cristobal. These companies were informed about the project, decided to join and submitted their letters of co-financing that support this project. The priorities of the project are helping create a sustainable PCB management and elimination system through the involvement of public and private companies and the general public by providing services for collection, transport, interim storage and final disposal of PCBs. These activities will be executed under the control of responsible government institutions in accordance with a strengthened legislative framework.

#### A.3 The GEF Agency's comparative advantage:

10. The United Nations Industrial Development Organization (UNIDO) is a specialized UN agency whose mandate is to promote Inclusive and Sustainable Industrial Development (ISID) in line with the new sustainable development agenda currently being formulated to succeed the UN Millennium Development Goals (MDGs). UNIDO's comparative advantage lies in its mandate of promoting competitive and environmentally sustainable industries. UNIDO has involved many industrial sectors in its GEF portfolio including: energy efficiency in industries, renewable energy, water resources management, and chemicals management. It has a unique comparative advantage in technical cooperation and industrial development projects, including technical assistance and technology transfer for PCB decontamination.

11. In particular, UNIDO has a long track record in assisting developing countries and countries with economies in transition to implement GEF projects on chemicals management. UNIDO's Environmental Management Branch (EMB) pursues to integrate POPs-related projects into wider national chemicals management efforts. A document by the GEF Council highlights UNIDO's Stockholm Convention Unit (SCU) technical comparative advantage in the field of POPs elimination / reduction, which is a key component of the proposed project.
12. To date, the GEF under its Chemicals Focal Area has approved more than 160 national, regional and global projects, particularly during the GEF-4 and GEF-5 replenishment periods. A large portion of these projects deal with the environmentally sound management of PCBs, but there is also a good number of projects dealing with best available techniques (BAT) and best environmental practices (BET) to reduce unintentional POPs (u-POPs), contaminated sites, and e-waste / medical waste. In addition, the GEF has approved more than 200 national Enabling Activities projects, including NIP development and NIP review and update projects. UNIDO has been an excellent partner to the GEF, as it has dealt with an important share of these projects.
13. In particular, UNIDO has successfully implemented projects on PCB management and BAT/BEP, which are the main components of this project. The aim of UNIDO's PCB projects is to assist countries to comply with the PCB-related obligations under the SC by eliminating or reducing the releases of PCBs into the environment. This contributes to strengthening the national regulatory framework, the institutional capacity at the national and local level, and raising awareness among relevant stakeholders, especially workers dealing with PCB-contaminated equipment and women and children living near sites with PCB-contaminated equipment. Improving the PCB inventory and strengthening the national laboratory capacity as well as promoting an ESM and environmentally sound disposal of PCBs are essential for the ESM of POPs throughout their lifecycle. UNIDO is highly involved in technology transfer of PCB decontamination technologies in case the project would require developing investment on this area. Stakeholder consultations with the government, private and public sector, NGOs and CSOs are other areas where UNIDO has been particularly successful in interacting with the national stakeholders, with the help of the national executing agency (NEA) and project coordination unit (PCU).
14. UNIDO has also accumulated extensive experience in the ESM of PCBs in Bolivia's neighboring country Peru, which will also be beneficial for project implementation of this proposed MSP in terms of sharing regional information and exchanging experiences. The proposed project draws on these UNIDO experiences by strengthening national capacities for ESM and disposal of PCB-contaminated oil and equipment.
15. Through the technical assistance provided for the development of Bolivia's first NIP, and now through the assistance for the NIP review and update, UNIDO has first-hand knowledge about the PCB-related situation in Bolivia, which has been used for drafting the relevant action plans for the elimination and/or reduction of PCBs, already mentioned in paras 3-6 above. Initial stakeholder consultations, especially with the private sector and the government, were conducted during implementation of the NIP enabling activities (EA) project and have been further intensified during the development of the PIF and CEO approval stages of this project.
16. Due to its experience and expertise in POPs projects and the reasons already mentioned, UNIDO is well equipped to implement this project. UNIDO also has an Office in Bolivia that is assisting with the NIP review and update and with the PPG phase of this project. The field resources within the country and region will be fully engaged during project preparation and implementation.
17. Last, but not least, UNIDO is providing US\$90,000 cash contribution as co-financing for the project. This will essentially cover project technical assistance and monitoring of the implementation and of the evaluation.

A.4. The baseline project and the problem that it seeks to address:

## 18. CONTEXT INFORMATION

19. The baseline analysis for this MSP is based on information gathered during the first NIP, through the PIF of this project and particularly through consultations conducted during the PPG phase (e.g. stakeholder consultations with the Government, private sector and consultation workshops held in La Paz with participation of relevant private and public-sector stakeholders).
20. As already mentioned, UNIDO has assisted Bolivia during the development of the first NIP and is currently supporting the country during the UNIDO-GEF Funded project, “Enabling Activities to Review and Update the NIP for POPs under the SC,” which will include the new POPs listed under Annexes A, B and C of the SC and in the national POPs management strategy. This MSP would be the first Stockholm Convention post-NIP project funded by the GEF in Bolivia.
21. The Vice Ministry of Environment, Biodiversity, Climate Change and Forest Development Management (VEBCF) is the national POPs focal point and will be the national executing agency (NEA) for this MSP.
22. Bolivia has demonstrated a strong technical, political and financial interest in developing the environmentally sound management and disposal of PCBs. So, there is a need to develop a structured national approach towards this objective that will help Bolivia fulfil part of its SC commitments; nonetheless, the country needs technical and financial assistance to strengthen its national capacity and this GEF funded project will contribute towards that change.
23. Private stakeholders such as private and small consumers, maintenance companies, oil companies and, in particular, the mining industry will be considered in the PCB inventory.
24. This initiative will contribute to the GEF strategic goal to promote the environmentally sound management of chemicals for the protection of human health and the environment, which in turn contributes to the overall objective of the Strategic Approach to International Chemicals Management (SAICM).
25. The project will join the UNIDO-GEF funded initiatives in Latin America. Currently, Peru is implementing the UNIDO-GEF project “Environmentally Sound Management and Disposal of PCBs” (GEF ID 3709) that will provide feedback, lessons learned and contribute to the success of the project in Bolivia, since both share the same regional context and some similar challenges and opportunities.

## BASELINE SCENARIO

26. Without GEF funding, Bolivia would be unable to comply with the SC requirements related to PCBs management and disposal by 2028, so the risks of exposure to PCBs that pollute the environment and threat human health, will fuel high environmental and health concerns within the country, especially for workers dealing with PCB-oil, PCB-contaminated equipment and PCB waste, as well as environmental and health concerns for the general public and at the global level due to the POPs properties of PCBs.
27. Without a proper technical and financial intervention, Bolivia could not develop and implement effectively an

environmental management system (EMS) for PCBs, nor could adopt the necessary regulatory framework and develop its institutional capacity to monitor and control its PCBs. Due to its low technical capacity, a detailed PCB inventory could not be developed, nor analytical capacity be built, so no significant improvement in the existing storage conditions and environmentally sound management of PCBs could be achieved.

28. Under this scenario, PCBs will still be released into the environment and cross-contamination will continue, causing potential environmental and human health risks, especially to workers, communities living close to in-use and phase-out transformers, women and children. Occupational health, safety standards and awareness raising material will not be available to help protect workers and the population living nearby storage facilities from the exposure to PCBs.

## BASELINE ANALYSIS

29. In line with the priorities of the NIP, Bolivia has requested UNIDO's assistance as GEF Implementing Agency to support the country in technical matters and seek investment support from the GEF and other potential partners to address the challenges associated with the ESM of PCB in the country. Protection of the human health and the environment from the risks associated with POPs is a top priority stated in Bolivia's national environmental management strategy.

30. a) Regulatory framework and institutional capacity for the implementation of PCB related measures of the SC on POPs.

Bolivia does not have a national legislation for the environmentally sound management of PCBs that includes generation, distribution, transmission, identification, handling, phase-out, collection, transport, interim storage of PCB contaminated equipment, oils and waste and their final disposal. The development of a legal framework for the implementation of an ESM for PCBs and the necessary institutional capacity building for the monitoring and compliance control. This legislation needs to be accompanied by training of the stakeholders on the technical guidelines for the ESM of PCBs and on their responsibilities as PCB owners.

31. Neither there is a legal framework for PCB management, nor a national PCB management policy with the corresponding technical guidelines that provides Bolivia with mechanisms to allow it to move forward in its compliance of the Stockholm Convention commitments and the final disposal of its PCB inventory.

32. b) Technical capacities for the implementation of PCB related measures of the SC on POPs

The PCB owners in Bolivia are mostly public and private electricity generation and distribution companies, maintenance companies, as well as oil, mining and steel producing companies. The Ministry of Environment and Water (MoEW) has developed good efforts to engage the public companies in this project, and the private sector has also committed to contribute with co-financing for this project. During the PPG process a workshop was held with representatives of both the private and public sectors, and the companies expressed their interest to participate and become partners for the project implementation. Now they are aware and understand the importance of managing their PCBs in an environmentally sound manner and believe that an economically viable disposal alternative will be identified through the project.

33. Bolivia and its electricity, oil and mining sectors have limited experience on the ESM of PCB and lack the adequate infrastructure, equipment and technology to do it properly. There is a need to improve the analytical capacity for field testing and chromatographic gas analysis in established laboratories.



34. The preliminary inventory developed during the NIP process did not quantify the total amount of PCB contaminated equipment, oil and waste existing in Bolivia at that time. The inventory was done later on in electricity generation and distribution companies but with limited number of tests conducted only with Clor-N-Oil kits. Thus, the results are not indicative of the actual amounts of PCB contaminated equipment and oils and such inventory covered only a small sample of companies from the oil and mining sector which includes many companies that have very old equipment that is potentially contaminated with PCB. It is estimated that there are at least 400 tons of PCB contaminated waste, some with PCB concentrations above the 25,000 ppm.
35. The lacking information from the preliminary inventory of PCBs makes it difficult to establish priorities and propose alternatives for the ESM of PCBs. However, summary data obtained from the relevant ministries and companies during the PPG phase shows the potential PCB holders in each sector and location of Bolivia (see Table 1). Results indicate the sector, number of nationalized and private companies and distribution of the companies in the main Bolivian cities.
36. Table 1: Potential PCB holders in each sector and location of Bolivia

Ministry	Sector	Nationalized companies (Nr.)	Private companies (Nr.)	Distributed by cities							
				La Paz	Oruro	Potosí	Santa Cruz	Cochabamba	Tarija	Pando	Chuquisaca
Mining	Mining Cooperatives	621	2	354	39	120	17	63	3	19	6
Fuel	Electricity	7	8	8	10	3	8	13	5	1	2
	Oil	8	12	2	1	1	14	2	6		1
Governship	Cement		2	1							1
laboratories IBMETRO		0									

37. Currently the management of out-of-service equipment is not environmentally sound and there is a lack of knowledge and information about technical standards and procedures for the identification, labelling, management and disposal of PCB contaminated equipment. This can be readily demonstrated by the amount of “hot spots” found in the country. Blood samples taken from mining workers resulted in concentrations of up to 900 ppm. These are extremely high PCB concentration levels for human blood.
38. Bolivia does not have developed the waste management sector sufficiently to have facilities for the environmentally sound disposal of PCB contaminated equipment, oil and waste. There are no companies that can develop safe disposal or elimination alternatives for PCB-contaminated oil, equipment and waste.

#### c) Awareness and public information on PCBs and POPs

39. The lack of public awareness and limited availability of detailed public information on POPs issues and PCBs have been identified as major constraints for the SC implementation in Bolivia. There is no evidence of significant awareness raising campaigns targeting government staff, private and public companies and the general public, especially women, children and workers that deal with PCB-contaminated oil, equipment and waste. Journalists focusing on POPs-related issues do not have sufficient knowledge of or special training on these matters, so they cannot generate the adequate information for the general public.

## BARRIER ANALYSIS

40. The threats, fundamental causes and barriers to holistic ESM of PCBs in Bolivia are stated below.
41. Barriers related to the regulatory framework and institutional capacity for the implementation of PCB related measures of the SC on POPs

42. *(i) Lack of enforcement of PCB-related legislations, regulations and national standards*

The lack of a formal legislative structure or regulation for PCBs is an important barrier for the implementation of an environmentally sound management system for PCBs. The necessary PCB management regulation should be accompanied by technical guidelines and training for proper compliance.

43. *(ii) Lack of long-term strategies and guidelines to ensure a progressive phase out and elimination of PCB contaminated equipment, oils and wastes.*

To comply with its obligations to the Stockholm Convention, that is to reduce and eliminate its PCB inventories by 2025 and related wastes by 2028, Bolivia has to establish a national PCB elimination system based on the existing inventories. The alternatives for elimination or final disposal will be determined by the analysis of technically and economically viable alternatives. The export of oil with low concentrations of PCBs is costly; therefore, national alternatives should be developed.

44. *(iii) Low level of national expertise in identifying and assessing environmental management system (EMS) options for PCBs*

There is a need to create adequate institutional capacity and a regulatory framework to enforce the implementation of a national PCB management system among all PCB owners. Training sessions should be developed for staff of the regulatory bodies and for PCB owners so they can learn their corresponding responsibilities and obligations for the fulfilment of the regulations.

45. Barriers related to technical capacities for the implementation of PCB related measures of the SC on POPs

*(iv) Lack of an updated and accurate PCB inventory*

The inventory carried out during the NIP process was not complete as it did not target all stakeholders who potentially deal with PCBs in Bolivia. Also the inventory was based on the application of Clor-N-Oil kits to a small number of potentially PCB contaminated equipment and oils. The results obtained led to an estimate of 400 tons of PCB contaminated equipment, oils and waste. However, a national inventory that includes all of the stakeholders and processes is required: electricity generation and distribution companies, the oil and mining industry, private / small consumers and maintenance companies, to determine the location of the contaminated equipment, oils and wastes, as well as the PCB concentrations. Accurate information is necessary to implement an ESM management system, determine the most economically-feasible technology for PCB elimination to minimize risks and reduce the stocks of PCB-contaminated oil, equipment and waste in

Bolivia.

46. (v) *Lack of analytical capacity, including laboratory and accreditation procedures*

There is a need to strengthen the existing laboratories with training and analytical capacity building for the analysis of PCBs. There is no laboratory with analytical capacity for performing PCB analyses, even though some have gas chromatography equipment. So, a laboratory should be identified to be equipped with PCB analysis expertise and capacity. Interested laboratories should have access to training on the accreditation process required towards this objective. The use of field quantitative measurement devices like the L2000 DX or similar Chloride analyzers should be implemented to facilitate the inventory in a more cost effective way.

47. Barriers related to awareness and public information on PCBs and POPs

(vi) The public and private stakeholders that are potential PCB owners need to be aware of their responsibility and should get involved in implementing an ESM system for the identification, handling, occupational health measures, reduction and elimination of equipment and oils contaminated with PCBs. The general public, particularly women and children who live in areas near electrical equipment maintenance facilities should be aware of the risk to human health and the environment due to improperly managed PCBs and related wastes.

48. The project will address the above barriers to integrated PCB management through the two components described in Table 2.

Table 2: Components addressing the barriers to an ESM of PCBs

Component	Barrier
1. Regulatory and institutional strengthening and awareness raising for the implementation of PCB related measures of the SC on POPs.	<ul style="list-style-type: none"> <li>➤ Low level of national expertise in identifying and assessing ESM options for PCBs;</li> <li>➤ Lack of analytical capacity, including laboratory and accreditation procedures;</li> <li>➤ Lack of enforcement of PCB-related legislations, regulations and national standards;</li> <li>➤ Lack of public participation and awareness of the POPs issues.</li> </ul>
2. Environmentally sound management (ESM) of PCB containing electrical equipment and waste.	<ul style="list-style-type: none"> <li>➤ Lack of an updated and accurate PCB inventory;</li> <li>➤ Lack of long-term strategies and guidelines to ensure a progressive phase out and elimination of PCB contaminated equipment, oils and wastes.</li> </ul>

49. By overcoming the aforementioned barriers to ESM of PCBs within the framework of this project, Bolivia expects to eliminate at least 400 tons of PCB contaminated equipment, oils and wastes, while improving the environmentally sound management of PCBs in the country and upgrading the technical expertise required.
50. The development of an integrated and ESM system for PCBs in Bolivia requires the participation of several different stakeholders from the public and private sectors, including public institutions, electricity sector companies, oil and mining companies, analytical laboratories, and civil society organizations. During the PPG phase some of these stakeholders were involved in awareness-raising activities and inventory training, so they are ready and willing to get involved in the project implementation.

A. 5. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

51. Project rationale and policy conformity

The proposed project is in line with the national POPs priorities developed during the first NIP in 2005, and fits the GEF-5 Focal Area Strategy Framework for Chemicals, particularly its Objective CHEM-1: Phase out POPs and reduce POPs releases. So, the GEF funding will support the development of an integrated ESM of PCBs in Bolivia to reduce up to 400 tons of PCBs, in line with CHEM-1 Outputs 1.1.1 Countries receiving GEF support to phase out the production or use of controlled POPs (other than new POPs); 1.4.1 PCB management plans under development and implementation; and, 1.5.1 Countries receiving GEF support to build capacity for the implementation of the Stockholm Convention.

52. Without GEF funding, Bolivia would be unable to comply with the SC requirements related to PCBs management and disposal by 2028, and thus the risks of exposure to PCBs that pollute the environment and threat human health will fuel high environmental and health concerns within the country, especially for workers dealing with PCB-oil, PCB-contaminated equipment and PCB waste, as well as environmental and health concerns at the global level due to the POPs properties of PCBs.
53. Similarly, without GEF assistance, Bolivia could not effectively develop, implement and provide training for a sound environmental management system (EMS) for its PCBs, nor develop the necessary regulatory framework and institutional capacity to monitor and control its PCBs, nor have the updated inventory required.
54. Bolivia's limited financial resources, technical, institutional and human-resource capacities make it difficult to achieve significant improvements in the existing storage conditions and proper PCB management to reduce PCB exposure to human health and the environment.
55. GEF assistance will contribute to the implementation of an EMS for PCBs that will reduce the current cross-contamination incidents with transformers that result in increases to the existing PCB inventory.
56. GEF assistance is essential to avoid that PCB-containing equipment continues to deteriorate at the storage locations and that the contaminated oils are then released continuously into the environment causing exposure of workers and local population to PCBs.

57. If the instruments for effective PCB management are to be created, GEF assistance is fundamental. Analytical capacity needs to be created through the upgrading of a laboratory with PCB parameters and training for the accreditation. An updated inventory and regulation formulated and implemented will allow the regulatory institution to monitor and control inadequate storage. Enforcement of regulations to remove leaking equipment will reduce the exposure of workers and the population living nearby PCBs storage facilities, thereby reducing the risks to human health and the environment. Without GEF assistance this would not be possible.
58. GEF assistance in this project is also required for implementing the occupational health and safety standards for workers handling PCBs, which will reduce the exposure of these workers to PCB releases during maintenance.
59. In the absence of GEF funding and the technical assistance associated with it, Bolivia's capacity to formulate the required regulations and create institutional capacity to monitor and control compliance, implementation of an environmentally sound management system for PCBs would occur very slowly, resulting in the continuity of improper handling of PCB equipment, oils and wastes and the risks associated with these practices.
60. The possibility of developing and implementing a disposal strategy that allows Bolivia to comply with its SC commitments in a cost-efficient way, resulting in the elimination of most of its inventoried PCBs, would be remote unless the country receives the corresponding GEF support.
61. The incremental activities proposed under this project will address the identified barriers and establish an integrated and systematic approach towards the environmentally sound management and disposal of PCBs. Not only compliance with the SC will be ensured, but also the reduction of the environmental and health risks that these POPs pose will be reached.
62. The project global environmental benefits are the prevention of releases of PCB-contaminated oils and of u-POPs into the environment. The project will eliminate at least 400 tons of PCB contaminated equipment, oil and wastes through the implementation of a disposal strategy that will be based on the inventory results.
63. Table 3 shows the correlation between the Baseline Project (based on the co-financing) and the GEF additional project (based on the GEF grant), which will be explained in further detail through the next section.

Table 3: Correlation between the Baseline Project and the GEF additional project

Project Component	Baseline Project		GEF additional project	
	Co-finance		GEF grant support	
1. Regulatory and institutional strengthening and awareness raising for the implementation of PCB related measures of the SC on POPs.	<ul style="list-style-type: none"> <li>-Institutional capacity improved.</li> <li>-Regulatory framework for PCB management and phase out implemented.</li> <li>-Main stakeholders trained on ESM of PCBs and system implemented in the electricity, oil and mining sectors.</li> </ul>	1,000,000	<ul style="list-style-type: none"> <li>-Development of the regulatory framework and creation of the institutional capacity for PCB management.</li> <li>-Technical assistance in development of national ESM system for PCBs.</li> </ul>	200,000

2. Environmental management system (EMS) of PCB containing electrical equipment and wastes.	<ul style="list-style-type: none"> <li>-National reference laboratory established.</li> <li>-Inventory updated</li> <li>-ESM system for PCBs established.</li> <li>-400 tons of PCB contaminated equipment, oil and waste eliminated.</li> <li>-National disposal strategy for PCB, with financial scheme, developed and approved.</li> </ul>	3,715,000	<ul style="list-style-type: none"> <li>-Provide conditions for laboratory upgrade and accreditation.</li> <li>-Develop ESM and technical guidelines.</li> <li>-Technical assistance with cost-effectiveness analysis of disposal options.</li> </ul>	1,550,000
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#### 64. Project components, outcomes and outputs

The objective of this project is to establish an environmental management system (EMS) for PCB contaminated equipment, oil and waste in Bolivia and upgrade its technical expertise. The Ministry of Environment and Water, through its Vice-Ministry of Environment, Biodiversity, Climate Change and Forest Development Management will be the entity responsible for project management through its National POPs program (PRONACOPs).

65. The project has two technical components and a monitoring and evaluation component, each with its associated outcomes and outputs. Further details on project design are described below and summarized together with major risks, assumptions and impact indicators in the Project Results Framework (Annex 1). The following paragraphs provide a brief description of the purpose of the project outputs and their contribution to the defined outcomes.

66. Component 1. Regulatory and institutional strengthening and awareness raising for the implementation of PCB related measures of the SC on POPs

Outcome 1. (GEF: US\$ 200,000; co-finance: US\$ 1,000,000) Regulatory and institutional capacities for environmentally sound management of PCBs strengthened

One of the most important outcomes of this project will be the establishment of the rules and regulations to strengthen the institutional capacity for monitoring and controlling compliance, in all instances, with the rules set during implementation of the environmental management system for PCBs. Especial focus will be on the electricity sector companies that handle PCBs. The electricity sector companies have been already part of small and generally internal PCB projects, but it is now important to link their participation and commitments with their extended producer responsibilities through the formulation of a specific PCB management regulation. The regulatory institutions need to facilitate the awareness raising and training of their personnel on this topic and its corresponding PCB issues.

67. Output 1.1. Institutional representatives to the Project Steering Committee, and representatives to the Technical Committee appointed;

The project administrative structure needs to be created through the designation of the members of the Project Steering Committee that are high level representatives of the main stakeholders. The project technical and work plan aspects will be coordinated through the Technical Advisory Committee that will be involved in the operational decision making process.

68. There are several ministries involved on this project, among which the Ministry of Environment and Water, and the Ministry of Energy and Fuel are an essential part to ensure the adequate representation of the main stakeholders. Within these ministries, there will be a need to train their technical staff on the technical guidelines for the proper management of PCBs.

69. Output 1.2. Legal framework drafted;

This output involves the formulation of the regulatory framework under a participatory process with the main stakeholders and the necessary review by the legal departments of all the ministries involved on PCB management. All stakeholders and institutional inspectors will need to be trained with regard to the regulation and the corresponding technical guidelines for PCB management that are an integral part of this legislation.

70. Output 1.3. Environmental Technical Government staff (inspectors and regulators), authorities of the different sectors trained to implement the legislation adopted;

All relevant environmental technical government staff and authorities will be trained on the resulting PCB legislation to ensure its implementation.

71. Output 1.4. Society awareness raising and training conducted.

Outreach and awareness raising workshops will be the key activities under this output, to address health and environmental risks that occur due to the lack of appropriate handling of PCB contaminated equipment. The Ministry of Environment and Water in coordination with selected stakeholders will be in-charge of the design and implementation of the training and awareness raising campaigns for the society. The specific audiences will include workers dealing with PCB equipment and PCB wastes, people living close to facilities dealing with PCBs or PCB contaminated sites, as well as the general public. The target will be that at least 100 people (male and female) from the described audiences will be directly trained and that at least two awareness raising campaigns will be implemented during the project. Gender issues will be an integral part of these workshops (e.g. there will be gender-specific presentations and/or publications concerning health effects of PCBs on women and children and/or gender-specific technical guidelines), since there are communities, including women and children that are located close to the electricity facilities where PCBs are handled (hot spots).

72. The project will create awareness among local communities, especially women, children and indigenous populations on the health and environmental effects of PCB exposure, therefore contributing to the closing of the gap between developed and developing countries that address POPs issues.

73. Component 2. Environmentally sound management (EMS) of PCB-containing electrical equipment and waste

Outcome 2. (GEF: US\$ 1,550,000; co-finance: US\$ 3,715,000) Environmental management system (ESM) of PCBs established.

The project will address needs and challenges with respect to the ESM of PCBs and the development of technical and economically viable alternatives for the treatment and disposal of Bolivia's inventory of PCBs.

74. Output 2.1. Methods of PCB analysis adopted and laboratories accredited for PCB analysis.

Methods of PCB analysis will be examined and, after decision-making, adopted. Then, selected analytical laboratories will be supported, assessed and accredited regarding their capacity to conduct PCB analyses. Where required, the project will facilitate training and establishing of the analytical capacity and parameters.

75. Output 2.2. ESM system for control and disposal of PCBs established, including a guide on mitigation measures on environment, safety and occupational health, and relevant staff trained.

An EMS will be established to identify the actions and responsibilities of the different PCB holders with regard to their PCB contaminated equipment, oils and wastes, their identification, storage, management, transport and disposal, through the development of technical guidelines.

76. Guidelines will be produced for and with the stakeholders, to be implemented in the electricity companies; the institutional inspectors must be aware of their responsibilities for the proper management of PCBs. Another important result is identifying and strengthening a national reference laboratory for PCB analysis to detect and determine concentrations in PCB contaminated oil and in body fluids. Technical guidelines set by this project will also improve existing management practices, e.g. regarding "hot spots", and facilitate the determination of economically and technically viable disposal options.

77. Technical norms and guidelines for the proper implementation of the ESM will be developed and validated, and stakeholders will be trained regarding the related national policy.

78. Output 2.3. In-depth inventory of major owners of PCB-contaminated equipment and development of the national management plan for PCB disposal

A comprehensive inventory including all potential PCB holders within the electricity sector, the oil and mining sector, and private companies that have their own transformers is essential to determine the types and quantities of contaminated equipment, and contaminated oils and wastes along with their corresponding PCB concentrations. Data collected during the inventory will be included in an information system that will facilitate the continuous updating of the PCB findings through the use of methods for field collection and data analysis.



79. The national inventory will be updated and the information included in a database to allow the proper reporting to the Stockholm Convention and the monitoring of the elimination of contaminated equipment and oils. The updating of the inventory information will be assisted with portable and analytical field equipment for the identification of contamination and the determination of PCB concentrations.

80. Output 2.4. PCB disposal plan implemented, PCBs phased out and long-term strategy developed (based on project results)

PCB phase-out in Bolivia will be achieved in three steps (i) development of a PCB disposal plan (for project duration), (ii) phase-out of up to 400 tones (during project duration) and (iii) development of a long-term PCB strategy (to ensure sustainability of the project). The PCB disposal plan to phase out up to 400 tones will be developed based on the results of the PCB inventory, particularly the quantities of PCBs and their concentrations. Then, the search for the appropriate elimination/treatment technology will be assessed taking into consideration, among other issues, the amounts of PCBs within three main concentration ranges (0 to 50 ppm; 50 to 3000 ppm, and above 3000 ppm) and the economic viability of the candidate technologies for the amounts within each group. This will provide the inputs to help decide whether the contaminated oils and equipment should be treated through de-chlorination (within the country) or if they should be exported (possibly for concentrations above 3000 ppm).

81. To complement this output, a comprehensive inventory should be completed and a reference laboratory identified and supported to strengthen its analytical capacity and promote its accreditation.

82. Prior the phase-out of PCBs during and beyond this project, the development of an ESM and a disposal strategy for the national elimination plan, including identification of a technically and economically feasible disposal alternative for the amounts beyond the 400 tones of PCBs tackled by this project is required.

83. Once the alternative technologies for PCB elimination/treatment are defined, a national elimination plan will be assembled based on the individual elimination plans that the PCB owners will develop with assistance of the project. The national management plan will include specific guidelines and a time line that will consider the deadlines for the elimination of the existing inventories in line with Bolivia's commitment to fulfil the Stockholm Convention. The individual elimination plans will allow PCB owners to monitor their elimination progress during and beyond project life cycle and will ensure that PCB owners are actively involved in project execution.

84. The developed national elimination plan, including the individual elimination plans, will also provide the necessary inputs for exploring long-term financial schemes that could be available considering different financial sources for completing the PCB elimination plan after this project is over, assuming that amounts of PCBs significantly over 400 tones are found. This plan should also define a long term strategy, especially involving the private sector, to ensure sustainability of PCB elimination/treatment once this MSP is completed.

85. Bolivia's issue of cross contamination and the implementation of proper management practices during equipment maintenance will be addressed in the environmental management system to be established, that will set specific measures to avoid future cross contamination.

86. The proposed MSP will also be implemented in line with the requirements of the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal and of the Rotterdam Convention on the Prior Informed Consent Procedures for Certain Hazardous Chemicals.

87. Component 3. Project management, monitoring and evaluation.

Outcome 3 (GEF: US\$ 100,000; co-finance US\$ 175,000)

Output 3.1 Monitoring and evaluation framework designed and implemented according to GEF procedures.

The activities associated with this outcome include organizing an inception workshop to validate or sharpen the project log frame and related baselines and indicators for the regular monitoring and evaluation procedures. These procedures will involve completion of an evaluation based on project design, project outcomes and impact indicators, development of an annual project financial audit, and preparation of APR/PIR reports. The completion of an MTE and a final evaluation are key activities that will be completed under this component.

A.6 Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

88. The potential risks associated with project implementation are summarized in Table 4.

Table 4: Potential risks associated with project implementation

Risks	Mitigation measures	Risk level
Lack of institutional support for PCB management related policy.	The national multi-stakeholder coordinating committee for the NIP development will be a support for implementing the PCB project and will build the required institutional support through its close relationship with the Vice-Ministry of Environment and Water, through PRONACOPs.	M

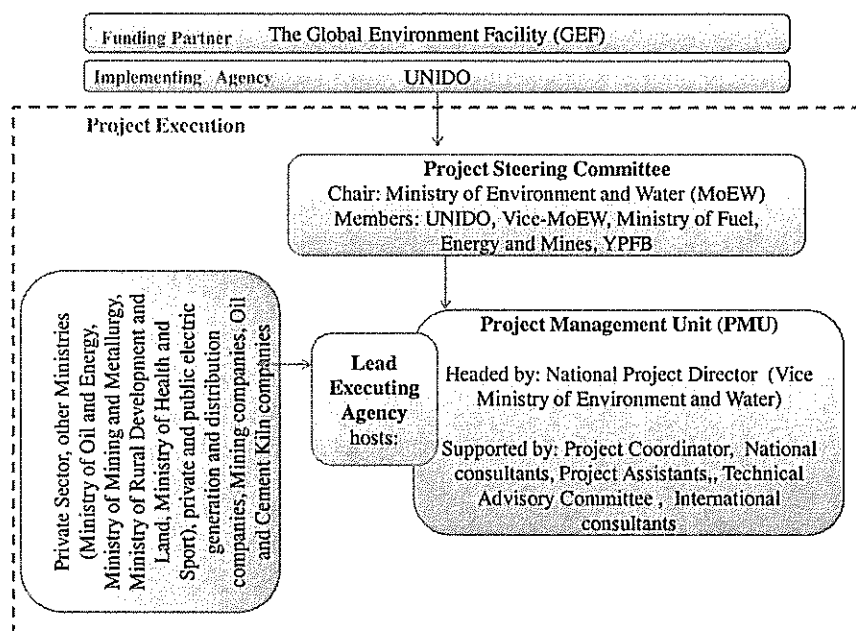
Lack of interest from public or private sector, for the fear of additional obligations to eliminate equipment containing PCB, without appropriate financial support.	<p>The establishment of a financial mechanism for replacing PCB contaminated equipment and facilitating its elimination will be addressed at project implementation. These financial measures will be integrated into the PCB elimination and disposal strategy to be developed. Cost-benefit analysis and alternatives will be discussed with involved companies' coordinators.</p> <p>In kind and cash co-financing commitments were obtained during the PPG phase through workshops and meetings with the stakeholders, where issues like these were discussed.</p>	L
Occupational and environmental risks concerning the management of the interim storage sites are not properly understood and addressed.	Operational and safety standards will be introduced and well-trained staff will manage the interim storage facilities based on international technical guidelines. Emergency and contingency plans to address spill and accident response will be implemented and personnel trained accordingly. Worker health and safety issues will also be addressed in the technical guidelines.	L
Climate change risks	There will not be significant risks associated with climate change as the technologies chosen will be BAT/BEP, excluding the emission of additional CO <sub>2</sub> or other GHG.	negligible

#### 89. A.7. Coordination with other relevant GEF financed initiatives

Since submission of its original NIP, Bolivia has not been able to implement any post-NIP project nor any related POPs project. Recently, the project "Enabling activities to review and update the national implementation plan for the Stockholm Convention on Persistent Organic Pollutants" has started its implementation. Thus, information regarding the updated inventories of PCBs will be shared between the two projects, either in parallel or after completion of the NIP review and update project.

90. Coordination will also be developed with the recently approved SAICM project “Strengthening national governance for SAICM implementation: updating the national chemicals management profile, developing a national SAICM capacity assessment, and holding a national SAICM forum in Bolivia.

91. B. Additional information not addressed at PIF stage:



92. B.1 Describe how the stakeholders will be engaged in project implementation.

93. Implementation arrangements

The GEF Implementing Agency for the Project will be UNIDO, with headquarters in Vienna and a local office in La Paz, Bolivia. The executing counterpart, also entering subcontracts for project execution, will be the Ministry of Environment and Water (MOEW), under direct leadership of the Vice Ministry of Environment and Water (VMOEW), whose operational area is the National POPs Program office (PRONACOPs). Sub-contracts, including draft Terms of Reference, will be issued in accordance with UNIDO's procurement procedures. Under these, project reporting and monitoring requirements under the project coordination should be addressed by UNIDO's project manager. The annual work plan will be approved in accordance with this CEO approval and GEF policies. UNIDO's project manager at headquarters in Vienna will work closely on follow-ups (e.g. administrative procedures such as customs clearance) together with UNIDO's field office in Bolivia, whenever necessary.

94. The VMOEW will coordinate the project and chair the Project Steering Committee. Other members of this committee will include the Ministry of Hydrocarbons, Energy and Mines, Yacimientos Petrolíferos Fiscales Bolivianos (YPFB), and UNIDO. Among its functions, the Project Steering Committee should approve the Annual Work Plan and the Annual Budget within the scope of the project approved duration

and approved budget, and subject to the GEF and UNIDO's established rules and regulations.

95. A Technical Advisory Committee (TAC) will be established for providing technical and practical input and coordination for project execution. The TAC will be integrated by representatives of the electricity generation and distribution activities. COBEE, the Compañía Boliviana de Energía Eléctrica that represents 16 generation facilities will be complemented by one distribution company from each geographic region and representatives from the mining sector through the Bolivian Mining Corporation (COMIBOL). The Technical Advisory Committee will review technical outputs and advise on technical issues during project implementation.
96. As part of the sub-contractual arrangements, a project coordinator will be recruited to carry out day to day project implementation in the field to ensure that project activities are fulfilled to achieve project objectives, outcomes and outputs. The Project Coordinator reports directly to UNIDO and coordinates with PRONACOPs that is the main technical responsible body. PRONACOPS in turn reports to the Vice Ministry of Environment and Water that is the main political responsible for the project.
97. As the GEF Implementing Agency (IA), UNIDO shall provide project cycle management services for this project, as defined by the GEF Council. The Government of Bolivia may request UNIDO to provide direct project services, specific to project inputs, according to UNIDO's policies and convenience. UNIDO and the Government of the Plurinational State of Bolivia acknowledge and agree that these services are not mandatory and will only be provided upon request in full accordance according to the GEF and UNIDO policies.
98. As provider of the fund for this project, the GEF logo will appear on all project publications. A quote on publications of GEF funded projects must also acknowledge the GEF's participation. UNIDO logo will be more visible and separate from the GEF logo, if possible, since for safety reasons UN visibility is more important.

#### Other stakeholders

99. The development of an integrated and environmentally sound system for PCB management in Bolivia requires the participation of several different stakeholders from the public and private sectors. These stakeholders range from public institutions to private organizations and include electricity sector companies, oil and mining companies, analytical laboratories, and civil society organizations, among others. During the PPG phase the stakeholders were involved in awareness raising activities and inventory training, and they will continue to be involved during project implementation.
100. The main stakeholders are the Ministry of Environment and Water, through its Vice Ministry of Environment, Biodiversity, Climate Change and Forest Management and Development (VMOEW) and its technical implementing program (PRONACOPs), public and private companies from the electricity generation and distribution sector, and the mining sector. The different stakeholders will engage in project implementation as described below.
101. The electricity sector and mining sector companies are presently working on the update of their inventories since the PPG process. The Technical Advisory Committee will have a representative of the electricity public companies, through its cooperatives, and a representative from the mining sector organization (COMIBOL), other stakeholders and the project management. In this committee, the most important project outputs will be discussed and evaluated, including the regulation to be developed, the

inventory updates, and the alternative elimination/treatment technologies that could be used.

102. The electricity and mining companies will also be responsible for the environmentally sound management of their PCB contaminated equipment and oils. They will be required to report to the Vice-Ministry of Environment and Water (VMOEW), through PRONACOPs (using the established database), regarding their inventories and any elimination or treatment activity that they use. They will be responsible for the fulfillment of the elimination outcomes established in the project document in accordance with the Stockholm Convention.

103. The Ministry of Environment and Water through its Vice-Ministry (VMOEW) and more directly through its PRONACOPs office will be responsible for coordinating all actions regarding the implementation of the Stockholm Convention and will act as Project Director to lead the implementation process.

104. The existing laboratories that plan to offer services for PCB analysis will participate in project activities aimed at evaluating their analytical capacity and get project support for the upgrade process.

105. Ministry of Environment and Water

This Ministry is responsible for the formulation and implementation of regulatory policies and their control and supervision, in coordination with the Ministry of Planning and Development, the Ministry of Agricultural Development, Rural and Land Use, the Ministry of Hydrocarbons and Energy, the Ministry of Mining and Metallurgy, the National Protected Areas System, the Public Universities System and other relevant stakeholders. The range of the strategic planning policies of the Ministry is very large, as it relates to activities for the management and use of natural resources and the environment, biodiversity, water supply, basic sanitation, irrigation and water resources, to ensure their sustainable use in articulation with the productive processes and the social and technological development.

106. Ministry of Hydrocarbons and Energy

This Ministry is responsible for formulating, controlling, and monitoring, the policies, strategies and norms of the oil and energy sector that guarantee the supply of natural gas, liquid fuel and electric energy for internal consumption, and the implementation of development and promotion of research for the hydrocarbon sector and new forms of alternative energy production through the use of renewable and nonrenewable natural resources, with due respect to the environment.

107. Ministry of Mining and Metallurgy

It is the responsible for proposing, formulating, executing and evaluating policies, norms, regulations and instructions for the metallurgical and mining development regarding prospection, exploration and mining, concentration, smelting, processing and marketing of metallic and non-metallic minerals, in coordination with relevant government agencies on investment, financing, taxation, marketing of minerals, social management, environmental management, and institutional development and monitoring compliance

108. Ministry of Rural Development and Land

It formulates, regulates and proposes policies, plans, research mechanisms, innovation, technology transfer and the national development strategy. It deals with the sustainable use and improvement of rural agricultural and forestry resources, and promotes economic and social development of communities and of economic and indigenous farmer organizations to protect their social, economic and cultural rights

by ensuring agricultural health and food safety in coordination with the Ministry of Environment, Biodiversity and Climate Change.

109. Ministry of Health and Sports

It develops, promulgates and evaluates plans, controls and leads the National Health System to ensure regulatory compliance of the health programs in articulation with the development of the country on the social security sectors, as well as public and private nonprofit and for-profit organizations and organizations linked to traditional medicine. The goal is to ensure health for the population through its promotion, disease prevention, cure and immediate emergency and disaster response in coordination with the Army and National Police. In addition, it develops and implements policies that encourage and promote the development of physical culture and sports at the preventative, recreational, training and competitive levels.

110. Yacimientos Petrolíferos Fiscales Bolivianos - YPFB (Bolivian Fiscal Oilfields)

It develops and promotes exploration activities using industrial safety standards in effective environmental and social conditions, in the context of corporate social responsibility. It makes viable an increased, optimal and efficient volume of hydrocarbons production, through the monitoring and control of work plans and budgets and the proper management of reservoirs to ensure the supply of natural gas for the domestic market and compliance with export contracts.

111. Electric generation and distribution companies (public and private)

There is a total of 72 generation and distribution companies. The most active ones are: Empresa de Luz y Fuerza Eléctrica de Cochabamba (ELFEC), Empresa de Luz y Fuerza Eléctrica de Oruro, S.A., (ELFEO), Compañía Boliviana de Energía Eléctrica S. A. (COBEE), Transportadora de Electricidad, S. A. (TDE), Interconexión Eléctrica –ISA Bolivia, S. A. (ISA), Empresa Nacional de Electricidad (ENDE), Empresa de Luz y Fuerza Eléctrica de Cochabamba S. A. (ELFEC), Empresa Eléctrica Guarachachi, S. A., Servicios Eléctricos Potosí, S. A. (SEPSA), Servicios Eléctricos de Tarija (SETAR). These are some of the electricity generation and distribution companies that have shown interest to participate in the project.

112. Mining companies, oil and cement kiln companies

There is a total of 621 public mines and 2 private ones. A large number of mines are grouped under the Corporación Minera de Bolivia (COMIBOL), which is a very proactive organization. The oil and energy sector has 7 electricity public companies and 8 private ones. The oil companies are a total of 8 public and 12 private entities. There is also a number of companies that produce Portland cement, like Sociedad Boliviana de Cemento (SOBOCE), Fábrica Nacional de Cemento (FANCESA), and Cooperativa Boliviana de Cemento, Industrias y Servicios (COBOCE). They should be contacted during project implementation.

B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCE/SCCF):

113. Socio-economic: The proposed project will achieve the disposal of at least 400 tons of PCB contaminated oils from Bolivia's PCB inventory. It will also create the enabling environment for the country to implement an environmental management system (EMS) for its existing PCB inventory. The implementation of an EMS with the PCB holders will facilitate the reduction of potential negative impacts on health and the environment, as well as the disposal of the remaining inventory in a cost-effective and safe way, not only for the fulfillment of the Stockholm Convention requirements but also to favor the Bolivian people. Socio-economic benefits will be monitored throughout project implementation by UNIDO's relevant indicators (# tons of materials recycled, # value of materials recycled; # tons of CO2 avoided)
114. Gender: 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, men, adults and children, influence susceptibility to health damage from exposure to toxic chemicals. Social factors, primarily gender-determined occupational roles, also have an impact on the level and frequency of exposure to toxic chemicals, the types of chemicals encountered, and the resulting impacts on human health. In line with UNIDO Environmental Management Branch (EMB)'s Gender Strategy, specific attention will be given to gender-mainstreaming throughout the project life cycle, e.g. workshops (measured as participation by male/female; gender-specific presentations; gender-specific information material), trainings (measured as number of male/female, gender-specific presentations, gender-specific information material), gender-specific awareness-raising campaigns (e.g. targeted to women's group; gender-specific knowledge materials) and gender-specific technical trainings, wherever necessary.
115. Regarding the specific management and disposal of PCBs, it is safe to assume that the majority of PCB handlers in Bolivia, such as workers employed by electricity companies and the mining sector, maintenance companies, junkyards, large consumers and industries, among others, are men. Nonetheless there are women and children in the communities surrounding electric maintenance facilities, who spend most of their time in potentially PCB contaminated areas which, if confirmed, may represent high risks to them. The project will propose protocols and laboratory capacity building for the analysis of different human matrices such as blood and breast milk that could be a deciding factor in defining which populations might be at greater risk of exposure to PCBs, particularly in areas where the management of contaminated equipment has not been well handled in the past.
116. These gender dimensions will need to be present in both project and policy level interventions regarding the sound management of chemicals in general and of PCBs in particular. Through its public awareness activities (e.g. gender-specific publications and trainings), the project will seek to get representation and commitment of vulnerable worker populations and local communities in the formulation and incorporation of gender dimensions in project activities.
117. Global Environmental Benefits: The project will ensure that a significant quantity of PCBs is destroyed, that would otherwise enter the global environment to compound global environmental problems. The project will create an enabling environment that will facilitate the decommissioning and destruction of the existing PCB inventory in Bolivia at the lowest possible cost. The project has secured funds for the destruction of at least 400 tons of PCBs of the public and private sectors. Through co-financing, additional amounts of the existing PCBs inventory will be destroyed, resulting in further reduction of the potential risk to health and to the environment.



B.3. Explain how cost-effectiveness is reflected in the project design:

118. The proposed project is cost-effective in achieving its objective of disposing of PCBs (in tons) as it will work in coordination with already existing baseline activities that have invested in POPs management, as described in Paragraph 9. above, including the development of the PRONACOPs office and environmental units within other public and private organizations (e.g. the Ministry of Environment, Biodiversity, Climate Change and Forest Development Management; the Ministry of Hydrocarbons and Energy; the National Electricity Company of Bolivia (ENDE) and seven of its subsidiaries; the Electricity Services of Tarija (SETAR); the Mutun Steel Company, and Minera San Cristobal). This setting will be the basis for building the project.
119. There are companies that have large interest in completing their inventories on equipment and dielectric oils, to work towards the development of technological alternatives for PCB treatment and disposal; for instance, the Bolivian Mining Cooperation (COMIBOL- mining sector), SETAR, ELFEOSA, TDE, SEPSA, COBBE, ELFEC (electricity sector), YPFB Corporation and YPFB Logistics (hydrocarbon sector). Nonetheless, their main data need to be verified on site. By maximizing national stakeholder contributions, the GEF financial support will be applied to cover the incremental costs of project components that help provide global environmental benefits, so these stakeholders and others are able to move forward in developing a final disposal solution that is technically and economically viable for their PCB inventories.

120. C. Describe the budgeted M&E plan:

Project monitoring and evaluation (M&E) will be conducted in accordance with established UNIDO and GEF procedures. The M&E activities are defined under project component 3 and the M&E budget is in Table 5 below. Monitoring will be based on indicators defined within the project results framework and complemented by the annual work plans. The GEF tracking tool will also be used as monitoring and evaluation tool, and will be submitted three times during the duration of the project (CEO approval, mid-term and at project closure).

121. UNIDO as Implementing Agency will involve the GEF Operational Focal Point, national executing counterparts and project stakeholders at all stages of project monitoring and evaluation to ensure that evaluation results lead to improved project design and implementation.
122. According to the Monitoring and Evaluation policy of the GEF and UNIDO, follow-up studies like Country portfolio evaluations and thematic evaluations can be initiated and conducted. All project partners and contractors are obliged to (i) make available studies, provide reports or other documentation related to the project and (ii) facilitate interviews with staff involved in the project activities.

123. Table 5: Monitoring and Evaluation table

M&E activity categories	Feeds into	Time frame	Budget USD *			Responsible Parties
			GEF (cash)	UNIDO (cash)	Gov't	
					In kind	
Measurement of GEF Tracking Tool specific indicators	Mid-term review and Terminal Evaluation Reports	At project mid-term and completion	5,000	4,500	5,000	MOEW/PRONACOPs and M&E consultants prepare reports, then MOEW/PRONACOPs submits final reports to UNIDO Project Manager
Organize Inception Workshop	Project Management	Within first two months of project start up	5,000	4,500	5,000	MOEW/PRONACOPs, UNIDO
Monitoring of project impact indicators (as per Log Frame)	Project Management; Semi-annual progress report; Annual GEF PIR	Semi-annually	17,000	15,300	20,000	MOEW/PRONACOPs and M&E consultants prepare reports, then MOEW/PRONACOPs submits final reports to UNIDO Project Manager
Periodic Progress Reports	Project Management; Annual GEF PIR	Semi-annually or annually	5,000	4,500	5,000	
Annual project financial audits	Project Management	Annually	5,000	4,500	5,000	MOEW, UNIDO
Hold annual tripartite review meetings	Project Management	Annually	20,000	18,000	20,000	MOEW/PRONACOPs, UNIDO
Mid-term review/ evaluation	Project Management	At project mid-term	20,000	18,000	20,000	UNIDO PM and/or independent evaluator

Independent terminal evaluation	Terminal Evaluation Review (TER) conducted by UNIDO EVA and/or GEF IEO	Project completion (at least one month prior to the end of the project and no later than six months after project completion)	23,000	20,700	30,000	Independent evaluator for submission to UNIDO Project Manager
Total M&E budget			100,000	90,000	110,000	

124. Project start

A Project Inception Workshop (IW) will be conducted within the first 2 months of project start with the full project management team, relevant government counterparts, co-financing partners, other stakeholders, UNIDO and representative from the UNIDO National and/or Regional Office.

125. The Inception Workshop should address a number of key issues including:

126. a.) Assist all partners to fully understand and take ownership of the project. Detail the roles, support and services and the complementary responsibilities of the UNIDO country and regional offices. Discuss roles, functions and responsibilities within the project decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
127. b.) Based on the project results framework and the relevant GEF Tracking Took, if appropriate, finalize the first Annual Work Plan (AWP). Review and agree on the indicators, targets and their means of verification and re-check assumptions and risks.
128. c.) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
129. d.) Discuss financial reporting procedures and obligations, and arrangements for annual audit. Plan and schedule project board meetings. Clarify roles and responsibilities of all project organization structures and plan/schedule their meetings. The first Project Steering Committee meeting should be held within the first 12 months following the inception workshop.
130. e.) An Inception Workshop report is a key reference document and must be prepared and shared with the participants to confirm and formalize agreements and plans agreed during the meeting.

131. Monitoring responsibilities and events

A detailed schedule of project review meetings will be developed by the project management team in close consultations with the project implementation partners and stakeholders' representatives, and included in the Project Inception Report. The schedule will include: (i) tentative time frames for Tripartite Reviews, Steering Committee Meetings, and (ii) project related Monitoring and Evaluation activities.

132. Daily monitoring of the project activities in the field will be done by the National Project Coordinator (NPC) and supervised by UNIDO's project manager based on the approved Annual Work Plan (in line with the CEO approval and GEF guidelines) and its indicators. The Project Team will inform UNIDO of any delays or difficulties faced during the implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial manner.
133. The Project Coordinator, Project Assistant and Technical Advisory Committee will fine-tune the progress and performance/impact indicators for the project at the Inception Workshop. Specific targets for the first year implementation progress indicators together with their means of verification will be developed in this workshop. These will be used to assess whether the project is proceeding at the intended pace and in the right direction, and will form part of the Annual Work Plan. Targets and indicators for subsequent years will be reviewed annually as part of the internal evaluation and planning process undertaken by the Project Management (PM).
134. The environmentally sound management and disposal of PCB contaminated equipment, oils and waste is the main objective of this project; so, the most directly related indicators to measure project outcomes/results/impacts would be the following, among others:
- Inventory (number) of equipment tested for PCBs.
  - Weight of PCB contaminated oil that was decontaminated.
  - Weight of high-concentration (pure PCBs) contaminated oil/equipment.
  - Weight of low-concentration PCB contaminated oils cleaned through dechlorination.
  - Inventory (number) of decontaminated equipment.
  - Weight of high-concentration PCB contaminated oils that require export for proper treatment / disposal.
135. UNIDO, through quarterly meetings with project counterparts or as frequently as deemed necessary, will undertake periodic monitoring of the project implementation process.
136. UNIDO will conduct periodic visits to be stated in the project Inception Report/Annual Work Plan to assess project progress. Members of the Steering Committee may also accompany these visits. A Field Visit Report will be prepared by UNIDO and the project team and circulated to all Steering Committee members no later than one month after the visit.
137. Annual Monitoring will occur through Tripartite Project Review (TPR) meetings, which will take place at least once a year. The first such a meeting will be held within twelve months of the start of project implementation. The Project Management will prepare an Annual Project Report (APR) and submit it to UNIDO at least four weeks prior to the TER for review and comments.
138. **Project Monitoring Reporting**
- The national project team in conjunction with the UNIDO focal point will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a) through (f) are mandatory and are specifically related to monitoring, while items (g) through (h) have a broader function and their frequency and nature are to be defined throughout project implementation.

139. (a) Inception Report

A Project Inception Report (IR) will be prepared immediately following the Inception Workshop. It will include a detailed First Year Annual Work Plan divided into quarterly timeframes, with detailed activities and progress indicators to guide the implementation during the first year of the project. The Work Plan will include the dates of specific field visits, support missions from UNIDO and/or UNIDO consultants, as well as timeframes for meetings of the project's decision-making structures. The report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, including any monitoring or evaluation requirement to effectively measure project performance during the targeted 12-month timeframe.

140. When finalized, the report will be circulated to project counterparts, who will be given a period of one calendar month to respond with their comments or queries. Prior to IR circulation, UNIDO will review the document.

141. (b) Annual Project Report

The Annual Project Report (APR) is a UNIDO requirement and a part of UNIDO central oversight, monitoring, and project management. It is a self-assessment report by project management to UNIDO, as well as a key input to the TPR. The APR will be prepared on an annual basis prior to the TPR to reflect the progress achieved in meeting the project's Annual Work Plan and will assess project performance in meeting the intended outcomes through the specific outputs and partnership work.

The format of the APR is flexible but should include the following:

- Analysis of project performance over the reporting period, including outputs produced and information on the status of the outcomes;
- Constraints experienced in the progress towards results and the reasons for these;
- Expenditure reports;
- Lessons learned;
- Recommendations to address key problems in lack of progress, if applicable.

142. (c) Project Implementation Review

The Project Implementation Review (PIR) is an annual monitoring process mandated by the GEF. It is an essential management and monitoring tool for project responsables and offers the main vehicle for extracting lessons from ongoing projects. Once the project is under implementation for a year, the project team shall complete the PIR. The PIR can be prepared any time during the year and ideally immediately prior to the TPR. The PIR should then be discussed at the TPR so the result will be a PIR that has been agreed upon by project staff, the national executing agency and UNIDO.

143. (d) Quarterly Progress Reports

Short reports outlining the main updates in project progress should be provided quarterly to UNIDO by the project team.

144. (e) Periodic Thematic Reports

As and when called for by UNIDO, the project team will prepare Specific Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be provided to the project team in written by UNIDO and will clearly state the issue or activities that need to be reported on. These reports will be used as a form of lessons learned exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered.

145. (f) Project Terminal Report

During the last three months of the project, the project team will prepare the Project Terminal Report (PTR). This comprehensive report will summarize all activities, achievements and outputs of the project, lessons learned, objectives met (or not met), and structures and systems implemented. The PTR will be the final summary of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may be taken to ensure sustainability and replicability of the project activities.

146. (g) Technical Reports

Technical Reports are detailed documents covering specific areas of analysis within the overall project. As part of the Inception Report, the project team should prepare a draft report list, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary, this report list will be reviewed and updated and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

147. (h) Project Publications

Project Publications will constitute a key method of crystallizing and disseminating the project results and achievements. These publications may have scientific, technological or informational nature, and contain texts based on the project activities and achievements as journal articles, multimedia publications or other format for distribution. Publications can be based on Technical Reports or may be summaries or compilations of a series of Technical Reports or other research papers. The project team will determine if Technical Reports merit formal publication and will also (in consultation with UNIDO, the government and other relevant stakeholders) plan and produce these publications in a consistent and adequate format.

148. Independent Evaluations

The project will be subjected to at least two independent external evaluations as follows:

149. (a) Mid-term Evaluation. An independent Mid-Term Evaluation will be undertaken around the middle of project implementation. The Mid-Term Evaluation will measure progress made towards the achievement of outcomes and will identify corrective actions, if needed. The evaluation will focus on the effectiveness, efficiency, and timeliness of project implementation. It will highlight issues requiring decisions and actions; and present initial lessons learned on project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the second half of the project term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this mid-term evaluation will be prepared by UNIDO based on the generic TORs developed by the GEF Evaluation Office.



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

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

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mr. Roberto Ingemar SALVATIERRA ZAPATA	Vice Minister for Environment, Biodiversity, Climate Change and Forest Management and Development	Ministry of Environment and Water; Bolivia	10/3/2013

**B. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Philippe R. Scholtès,  Managing Director, Programme Development and Technical Cooperation Division (PTC),  UNIDO GEF Focal Point		10/01/2014	Alfredo Cueva Jacome 	+431260265228	a.cueva@unido.org

150. (b) Final Evaluation. An independent Final Evaluation will take place within 6 months after the completion of project implementation, and will focus on the same issues as the mid-term evaluation. The final evaluation will also review impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by UNIDO in accordance with the TORs developed by the GEF Evaluation Office.

151. A project Management Information System (MIS) will be established to support the Project Coordinator and project management team to ensure that all project activities be completed on time, quality and within budget. The MIS will keep baseline records of Annual Work Plans and contracts with consultants and subcontracts with performance indicators, result reports, responsibilities and budgets, and compare them with the progress of the activities. A project website will be established to disseminate project information to the primary stakeholders and the general public.

152. Learning and knowledge sharing

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and fora.

153. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be beneficial for project implementation through lessons learned. The PC and project management team will identify, analyze and share lessons learned that might be beneficial for the implementation of similar projects in the future.

154. There will be a two-way flow of information between this project and other projects with similar focus.

155. Audit Clause

The Government will provide UNIDO with certified periodic financial statements and with an annual audit of those financial statements regarding the status of the GEF funds according to the established procedures set out in the Programming and Finance manuals. The audit will be conducted by a legally recognized Government auditor, or by a commercial auditor engaged by the Government.

156. According to the Monitoring and Evaluation policy of the GEF and UNIDO, follow-up studies like Country Portfolio Evaluations and Thematic Evaluations can be initiated and conducted. All project partners and potential contractors are obliged to (i) make available studies, reports and other documents related to the project and (ii) facilitate interviews with staff involved in project activities.

157. Legal context: "The present project is governed by the provisions of the Standard Basic Cooperation Agreement between the Plurinational State of Bolivia and UNIDO, signed on 1 December 1988."



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

Interventions	Indicators	Baseline	Target	Sources of Verification	Assumptions
<b>Project Objective</b>	To strengthen national capacities for the environmentally sound management (ESM) of PCBs, including disposal of up to 400 tons of PCB and related wastes and reduction / elimination of PCB releases from serviced electrical equipment at workshops and interim storage locations, to avoid cross contamination of electrical equipment and to protect human health and the environment.				
<b>Component 1</b>	<b>Regulatory and institutional strengthening and awareness raising for the implementation of PCB related measures of the SC on POPs</b>				
<b>Output 1.1</b> Institutional representatives to the Project Steering Committee appointed, by the Authorities of Ministries and relevant Institutions	# of Steering Committee Members appointed	Project Steering Committee in Bolivia is being integrated.	Steering Committee is fully appointed within the first three months of project implementation	Letters of appointment and meeting Minutes.	The Government of Bolivia is committed to strengthen the regulatory and institutional framework in line with the requirements under the Stockholm Convention on POPs. Change of Officers and lack of commitment. Slow process. Lack of commitment. Changes to technical level within the government infrastructure. Government staff is highly supportive to the project and allocate their staff for the trainings. PCB owners are also supportive to the project and participate in large number at the trainings.
<b>Representatives to the Technical Committee appointed</b>	# of Representatives to the Technical Committee appointed	Technical Committee has been agreed upon but representatives to it need to be selected and appointed	Representatives to the Technical Committee are fully appointed within the first three months of project implementation	Letters of appointment and meeting minutes	
<b>Output 1.2</b> Legal Framework drafted for adoption	# of environment policies, strategies, laws, regulation approved/enacted	Lack of existing laws, regulations and official guidelines on PCBs in Bolivia.	Laws, regulations, guidelines drafted/Improved and in line with SC requirements	Project proposal documents Records of discussions / approvals Official gazette	

<b>Output 1.3</b> Environmental Technical Government staff (inspectors and regulators), authorities of the different sectors must be trained to implement the legislation adopted	# of training participants/trainees (male/female) on PCB related regulations for Environmental Inspectors and relevant technical staff;  # of staff trained on how to mitigate human and environmental exposure risks of PCBs;  # of inspections within the legislation framework of conducted.	Lack of knowledge on PCB related legislation among environmental technical governmental staff and relevant technical authorities	4 targeted workshops  At least 20 local environmental inspectors and regulators trained on regulations (male/female)  At least 20 staff trained on risk mitigation (male/female)  At least 20 inspections conducted	Records of training sessions minutes and participants list (male/female)  Inspection reports available	
<b>Output 1.4</b> Training and awareness of the society.	# of training participants/trainees (male/female) from civil society, especially workers and community people.	Lack of knowledge on PCB management and risks associated with environment and human health	At least 2 trainings and awareness raising campaigns;  At least 80 participants (male/female)	Copy of meeting minutes and participants list (male/female)	
<b>Component 2</b>	<b>Environmentally sound management (ESM) of PCB-containing electrical equipment and waste</b>				
<b>Output 2.1</b> Methods for PCBs analysis adopted and laboratories accredited for PCB analysis.	# accredited methods adopted  # of laboratories accredited	There are no laboratories certified by the Competent Authority in this parameter; accreditation process is very long.	All relevant methods assessed and at least one adopted  At least one laboratory is accredited for PCB analysis.	Supporting documents of adopted method  Copy of accreditation certificate.	Laboratories are interested in expanding their expertise in PCB analysis.
<b>Output 2.2</b> ESM system for the use and disposal of PCBs including mitigation measures in environment, safety and occupational health available. All this published in a guide and ready for implementation. Relevant staff trained.	ESM strategy is available, guide is published and training plan is ready for implementation. Concerned staff is trained .	There is no PCB analysis for equipment in service.  Lack of separate working procedures for PCB positive and PCB free equipment, which allows for cross-contamination of PCB free equipment.	Approved ESM strategy is available. It has been discussed, approved and distributed to relevant sectors, and is ready to be applied.  At least 5 relevant staff is trained	Copy of meeting minutes of the approval of the ESM system  Copy of the ESM guidelines  Records of training and list (male/female)	PCB owners will strongly support the implementation of the ESM system as their environmental compliance and occupational safety standards will improve.

<b>Output 2.3</b> Establishment of in-depth inventory of the major owners of contaminated equipment and development of the national management plan for PCB disposal	# of equipment sampled and measured  # of inventory reports	An up-to-date, reliable national PCB inventory is missing	Samples from equipment representing at least 400 tons of PCB contaminated oil and wastes are taken;  National PCB inventory (covering at least 400 tons) available	Technical and sampling reports available	PCB owners and ministry is supportive of the PCB inventory and will support with in-kind and grant contribution.
<b>Output 2.4</b> PCB disposal plan developed, PCBs phased out and long-term strategy developed.	Existence of a phase out plan for PCB-containing equipment;  Quantity of PCBs (tons) eliminated/discontinued;  Existence of a long-term PCB phase-out strategy	Phase out plan for PCB disposal is missing;  400 tons of PCB are waiting to be disposed of in an environmentally sound manner  No long-term PCB strategy available	A phase-out plan is ready and approved for the phase out of PCB (in-use and already phased-out equipment);  At least 400 tons of PCB disposed of in an environmentally sound manner  A national long-term phase-out strategy available	Copy of approved phase-out plan.  Technical documentation of PCB phase-out  Copy of long-term phase-out plan	Project stakeholders strongly support and expeditiously implement the concept of developing phase-out plans and elimination of national PCBs
<b>Component 3</b>	<b>Project management and monitoring and evaluation</b>				
<b>Output 3.1. Monitoring and evaluation framework designed and implemented according to GEF procedures</b>	Monitoring and evaluation reports according to the project monitoring and evaluation plan  Monitoring of socio-economic benefits accomplished  Monitoring of the project's gender dimension achieved	M&E not available yet  Monitoring of socio-economic benefits not available  Monitoring of gender dimensions not available	Existence of monitoring reports according to M&E plan  Existence of evaluation reports according to M&E plan  Project indicators adjusted by management team and validated by UNIDO and project stakeholders	Management and monitoring teams established in due time and working effectively.	

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

N/A

# ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS<sup>5</sup>

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF: USD 85,000				
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>			<i>Amount Committed</i>
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>		
1. International consultant recruited	36,000	35,390		
2. LX 2000 and PCB test kits purchased	23,000	22,824		
3. Consultant travel	2,000	1,762		
4. National consultants recruited	14,000	14,479		
5. National workshop held	8,000	4,484		
6. Office supplies / customs / other	2,000	223		1,777
<b>Total</b>	85,000	79,162		1,777

<sup>5</sup> If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

**ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)**

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

N/A

# ANNEX E GEF BUDGET ALLOCATION

Output Based Budget for the GEF Grant									
Component 1	Type of Expense*	GEF Grant Budget Component 1						Output Total	
		Year 1		Year 2		Year 3			
		USD	month/	USD	month/	USD	month/		
			year		year		year		
Output 1.1	International Expertise								0
	Local Travel								0
	National Expertise								0
	Contractual Arrangement								0
	Training/Workshops	1,500							1,500
	International Meetings/Workshops								0
	Equipment								0
Output 1.2	Miscellaneous								0
	Output sub-total	1,500	0	0	0	0	0		1,500
	International Expertise	10,000	1	10,000	1				20,000
	Local Travel	5,000		5,000					10,000
	National Expertise	8,000	4						8,000
	Contractual Arrangement								0
	Training/Workshops			35,000					35,000
Output 1.3	International Meetings/Workshops								0
	Equipment								0
	Miscellaneous	3,000		4,000		2,000			9,000
	Output sub-total	26,000	5	54,000	0	2,000	0		82,000
	International Expertise			0					0
	Local Travel	5,000		5,000					10,000









# ANNEX F CO-FINANCING ALLOCATION

BUDGET DISTRIBUTION								
Interventions	GEF Budget	National Co-financing (US\$)			Co-financing			Total
	(US\$)	Grant	In-Kind	UNIDO (Grant)				
Outcome 1. Regulatory and institutional capacities for environmentally sound management of PCBs strengthened	200000	1554543	300033	5000			1859576	
Output 1.1 Institutional representatives to the Project Steering Committee and representatives to the technical committee appointed	55000	367000	95033	5000			467033	
Activity 1.1.1. Appointment of institutional representatives to the Project Steering and Technical Committee	2000	15000	10033				25033	
Activity 1.1.2. Prepare work plans	0	2000	10000	5000			17000	
Activity 1.1.3. Train environmental inspectors on PCB monitoring and control	53000	350000	75000				425000	
Output 1.2. Legal framework drafted for adoption	70000	537543	130000				667543	
Activity 1.2.1. Development of the regulatory framework under a participatory process with the main stakeholders.	11000	237543	50000				287543	
Activity 1.2.2. Presentation of the proposed regulatory framework to the Legal Affairs Department of the Ministry of Environment and Water, to determine the approval mechanism to be implemented.	0	25000	5000				30000	
Activity 1.2.3. Publication, distribution and awareness raising of the PCB norms.	7000	50000	20000				70000	
Activity 1.2.4. Train environmental inspector son the PCB norms and regulations.	32000	100000	25000				125000	
Activity 1.2.5 Train all of the stakeholders with regard to the PCB norms and regulations.	20000	100000	25000				125000	
Output 1.3. Environmental Technical Government staff (inspectors and regulators), authorities of the different sectors trained to implement the adopted legislation								
Activity 1.3.1. Train environmental technical staff and authorities	20000	150000	25000				175000	
	20000	150000	25000				175000	

Output 1.4. Training and awareness raising including gender issues) for the ESM of PCBs undertaken for main stakeholders including NGOs and civil society	55000	500000	50000			550000
Activity 1.4.1. Training workshops on health and environmental risks resulting from inadequate PCB management with the community leaders of the areas surrounding the storage locations.	30000	250000	25000			275000
Activity 1.4.2. Development of outreach and awareness raising material.	25000	250000	25000			275000
Outcome 2. ESM of PCBs established	1550000	6461859	460000	15000		6936859
Output 2.1. Methods for PCBs analysis adopted and laboratories accredited for PCB analysis	172900	111859	180000	15000		306859
Activity 2.1.1. Evaluation of national analytical capacity for PCB analysis.	10000	21859	10000			31859
Activity 2.1.2. Selection process for National Reference Laboratory.	5000	10000	20000			30000
Activity 2.1.3. Training for the National Laboratory on PCB analysis methodology.	10000	10000	20000			30000
Activity 2.1.4. Provision of analytical parameters for PCB analysis.	9900	10000	5000			15000
Activity 2.1.5. Development of guidelines for the PCB inventory.	8000	10000	20000			30000
Activity 2.1.6. Training of electrical and mining sector stakeholders on PCB inventory methodology.	15000	10000	20000			30000
Activity 2.1.7. Create the necessary capacity to identify PCBs in the field by purchasing and using of qualitative PCB determination equipment.	80000	10000	20000	5000		35000
Activity 2.1.8. Training for the use of the qualitative determination of PCB equipment.	15000	10000	25000			35000
Activity 2.1.9. Monitor and control the quality of inventory data.	10000	10000	20000			30000
Activity 2.1.10. Systematization of PCBs inventory information, its treatment / disposal in a centralized database, online and geo-referenced.	10000	10000	20000	10000		40000
Output 2.2. ESM system for the use and disposal of PCBs, including mitigation measures in environment, safety and occupational health.	81000	140000	105000			245000

Activity 2.2.1. Development of technical norms for the environmentally sound management of PCBs according to international standards.	15000	10000	35000		45000
Activity 2.2.2. Development and approval of the national policy for environmentally sound management of PCBs.	1000	20000	5000		25000
Activity 2.2.3. Socialization of the national environmental management policy for PCBs.	5000	20000	5000	10000	35000
Activity 2.2.4. Training workshops for regulatory institutions on the environmentally sound management of PCBs.	30000	30000	20000		50000
Activity 2.2.5. Training workshop for electrical, mining and fuel sector companies.	20000	30000	20000		50000
Activity 2.2.6 Training of environmental inspectors on PCB management for their monitoring and control.	10000	30000	20000		50000
Output 2.3. Establishment of in-depth inventory of the major owners of contaminated equipment and development of the national management plan for PCB disposal	55000	80000	65000		145000
Activity 2.3.1. Development of an elimination plan for each of the electrical and mining sector companies.	25000	15000	15000		30000
Activity 2.3.2. Elimination plan for each company developed and validated.	10000	15000	15000		30000
Activity 2.3.3. Cost-benefit analysis of the available technologies for the elimination of PCBs according to the Bolivian reality.	10000	40000	15000		55000
Activity 2.3.4. Monitoring of the implementation of the elimination plan in each company.	10000	10000	20000		30000
Output 2.4. PCB disposal plans developed, PCBs phased out and long-term strategy developed	1241100	6130000	110000		6240000
Activity 2.4.1. Development of long term elimination strategy for the PCB inventory.	10000	40000	20000		60000
Activity 2.4.2. Elimination strategy for PCBs approved and validated.	30000	20000	20000		40000
Activity 2.4.3. Financial analysis of the economic requirements for the implementation of the long term elimination strategy.	10000	20000	10000		30000
Activity 2.4.4. Development of planning for the implementation of the long term strategy.	8000	50000	10000		60000

Activity 2.4.5. Elimination/treatment of up to 400 tons of PCB contaminated equipment, oils and waste with priority given to those found in government utilities companies.	1183100	6000000	50000			6050000
Outcome 3: Project management and monitoring and evaluation established						
Output 3.1. Monitoring and evaluation framework designed and implemented according to GEF procedures	100000	60000	70000	70000		200000
	100000	60000	70000	70000		200000
Activity 3.1.1. Organization of inception workshop	10000	10000	10000	10000		30000
Activity 3.1.2. Evaluation of project impact indicators.	17000	5000	5000	10000		20000
Activity 3.1.3. Implementation of annual Project financial audit.	5000	5000	5000	5000		15000
Activity 3.1.4. Prepare Annual Project Reports (APR) and the Project Implementation Review (PIR).	5000	5000	5000	10000		20000
Activity 3.1.5. Annual review meetings	20000	10000	10000	5000		25000
Activity 3.1.6. External Mid-Term evaluation	20000	10000	10000	10000		30000
Activity 3.1.7. External Final Evaluation	20000	10000	10000	10000		30000
Activity 3.1.8. Complete Project final report	3000	5000	15000	10000		30000
Project Management Costs (PMC)	150,000	700,000	0	0	0	0
<b>TOTAL</b>	<b>2000000</b>	<b>8166402</b>	<b>1530033</b>	<b>90000</b>		<b>9786435</b>

# ANNEX G WORKPLAN

Interventions	Year 1				Year 2				Year 3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Outcome 1. Regulatory and institutional capacities for environmentally sound management of PCBs strengthened</b>												
<b>Output 1.1 Institutional representatives to the Project Steering Committee and representatives to the technical committee appointed</b>												
<b>Activity 1.1.1.</b> Appointment of institutional representatives to the Project Steering and Technical Committee												
<b>Activity 1.1.2.</b> Prepare work plans												
<b>Activity 1.1.3.</b> Train environmental inspectors on PCB monitoring and control												
<b>Output 1.2. Legal framework drafted for adoption</b>												
<b>Activity 1.2.1.</b> Development of the regulatory framework under a participatory process with the main stakeholders.												
<b>Activity 1.2.2.</b> Presentation of the proposed regulatory framework to the Legal Affairs Department of the Ministry of Environment and Water, to determine the approval mechanism to be implemented.												
<b>Activity 1.2.3.</b> Publication, distribution and awareness raising of the PCB norms.												











## **ANNEX H LEGAL CONTEXT**

### **Bolivia (Plurinational State of)**

“The present project is governed by the provisions of the Standard Basic Cooperation Agreement between the Plurinational State of Bolivia and UNIDO, signed on 1 December 1988.”

## **ANNEX I GEF TRACKING TOOL FOR PERSISTENT ORGANIC POLLUTANTS**

Separate file with file name: “*GEF-POPs-tracking tool*”

## **ANNEX J POTENTIAL PCB OWNERS AND DISTRIBUTION BY CITIES**

Separate file with file name: “*Potential PCB owners and distribution by cities*”