



GEF-6 PROJECT IDENTIFICATION FORM (PIF)

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

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PART I: PROJECT INFORMATION

Project Title:	Strengthening the environmentally-sound management and final disposal of PCBs, in Paraguay		
Country(ies):	The Republic of Paraguay	GEF Project ID: ¹	9357
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	150368
Other Executing Partner(s):	SEAM Paraguay, UNITAR	Submission Date:	12/22/2015
		Re-submission Date:	03/29/2016
			04/14/2016
			04/29/2016
GEF Focal Area(s):	Chemicals and Wastes	Project Duration (Months)	60
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:	[if applicable]	Agency Fee (\$)	375,559

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
(select) CCM-2 Program 3 (select)	GEFTF	3,953,250	14,485,000
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
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(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
Total Project Cost		3,953,250	14,485,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: To protect human health and the environment through environmentally sound management and final disposal of PCB-containing equipment and wastes, in Paraguay						
Project Components	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
1. Environmentally sound management and final disposal of PCB-containing equipment, wastes and stockpiles	TA	Outcome 1.1. National PCB policy improved, capacity built and knowledge and awareness increased	1.1.1 National PCB legislation and regulations are in line with international standards 1.1.2 National PCB management centre established to support PCBs owners to properly manage and dispose of PCBs	GEFTF	1,000,000	7,000,000

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

³ Financing type can be either investment or technical assistance.

			<p>and related wastes</p> <p>1.1.3. National data system set and reliable analytical services strengthened to fully support inventory development and management of PCBs and related wastes, in line with international standards and best practices</p> <p>1.1.4 Hazmat and risk management trainings conducted and awareness raised to reduced exposure of workers and the general public to PCB and related toxic wastes</p>			
		<p>Outcome 1.2. National PCB management plans ready for an smooth ESM and disposal of PCB-containing equipment and wastes</p>	<p>1.2.1 Inventory of at least 10,000 PCB-containing equipment units and PCB wastes carried out, including sampling in oil and soils and with sound analytical methodologies</p> <p>1.2.2. ESM and disposal plan for PCBs developed, including cost-effective disposal options</p> <p>1.2.3 Assessment of PCB/u-POPs pollution due to fire on ANDE PCB-storage facilities</p>			

	Inv	Outcome 1.3. ESM and disposal of PCB-containing equipment and wastes	1.3.1 Current PCB interim storage facilities upgraded and operational 1.3.2 At least 700 metric tons of PCB-containing equipment and waste disposed of and/ or decontaminated	GEFTF	2,625,000	5,735,000
2. Project Monitoring and Evaluation	TA	2.1 Monitoring 2.2 Evaluation	2.1.1 Monitoring system is set and operational 2.1.2 Progress reports are delivered and required decisions/actions are taken 2.2.1 Mid-term review and final independent evaluation are conducted 2.2.2 Lessons learned are shared with all relevant stakeholders for future project improvement	GEFTF	140,000	750,000
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					3,765,000	13,485,000
Project Management Cost (PMC) ⁴				GEFTF	188,250	1,000,000
Total Project Cost					3,953,250	14,485,000

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ()

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient Government	SEAM	In-kind	500,000
Beneficiaries	ANDE (Electrical facility)	Equity	12,000,000
Others	UNITAR	In-kind	250,000
GEF Agency	UNIDO	Grants	250,000
Private Sector	Laboratorios Diaz-Gill	Equity	1,000,000
Others	Several (PCBs)	Unknown	485,000

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

Total Co-financing			14,485,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS ^{a)}

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agenc y Fee (b) ^{b)}	Total (c)=a+b
UNIDO	GEFTF	The Republic of Paraguay	Chemicals and Wastes	POPS	3,953,250	375,559	4,328,809
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total GEF Resources					3,953,250	375,559	4,328,809

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

E. PROJECT PREPARATION GRANT (PPG)⁵

Is Project Preparation Grant requested? Yes No If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: \$250,000					PPG Agency Fee: 23,750		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
UNIDO	GEF TF	The Republic of Paraguay	Chemicals and Wastes	POPS	250,000	23,750	273,750
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total PPG Amount					250,000	23,750	273,750

⁵ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁷

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	<i>Hectares</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>Hectares</i>
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>Number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>Percent of fisheries, by volume</i>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	<i>metric tons</i>
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	<i>700 metric tons PCBs</i>
	Reduction of 1000 tons of Mercury	<i>metric tons</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>ODP tons</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	<i>Number of Countries:</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	<i>Number of Countries:</i>

PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area⁸ strategies, with a brief description of expected outcomes and components of the project, 4) [incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and [co-financing](#); 5) [global environmental benefits](#) (GEFTF) and/or [adaptation benefits](#) (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

1) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed

1. The objective of the project is to protect human health and the environment through environmentally sound management and final disposal of PCB-containing equipment and waste. The goal is to manage and dispose of up to 700 tons of PCB and related wastes, and reduce/eliminate PCB releases from serviced equipment.

2. Paraguay ratified the Stockholm Convention on POPs on 6 January 2004 and prepared its National Implementation Plan (NIP) that was officially submitted to the Stockholm Convention Secretariat, in 2007. This NIP identified PCBs as one of the top priorities in POPs management.

3. Since August 2015 UNIDO is working with full support of the government in Paraguay on this PIF on PCB management in line with the NIP priority. UNITAR will provide support for the training components of this project

⁷ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

⁸ For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

proposal. In September 2015, workshops with key stakeholders for Components 1 and 2 were conducted in Asuncion, Paraguay to discuss and finalize this PIF. Unfortunately, on 14 October 2015 there was a large fire at a temporary storage place for obsolete distribution transformers named Laurely, San Lorenzo, owned by the National Electricity Administration (ANDE). Around 6,000 transformers got burned, resulting in approximately 300 tons additional PCB-contaminated waste. Thus, this project has been adjusted accordingly to reflect the top priority given by the President of Paraguay, through the Minister of the Secretariat of Environment (SEAM) and the President of the National Administration of Electric Energy (ANDE) of Paraguay, after the emergency generated by this fire incident. The project, however, does not address any operations for site characterization, site assessment and remediation of the Laurely site, since the national government is seeking cooperation from the IADB and other organizations and donors to put together a coalition that tackles effectively this issue. Nonetheless, until this coalition can start developing its activities, some urgent measures should be put in place to contribute to immediate risk reduction, including the restriction of access to highly contaminated areas through fencing, information and signs; primary containment of contaminant release to neighboring water bodies and the corresponding monitoring and analyses; and ensuring safe access of project consultants and experts to the stored transformers and PCB-waste storage during the PPG-phase. For these reasons, a larger PPG grant (US\$250,000) is herein requested.

4. Paraguay has identified the need for conducting a thorough inventory on PCBs, gradually phasing out the PCBs-containing equipment and implementing a plan for their final disposal. PCBs possess toxic properties, resist degradation, bio-accumulate and are transported through air, water and migratory species, across international boundaries and deposited far from their place of release, where they accumulate in terrestrial and aquatic ecosystems. For instance, PCB pollution originating in Paraguay could enter terrestrial and aquatic media of neighboring countries and beyond. There is evidence of PCB contamination in wildlife (e.g. fish) sediment and water bodies as a result of past use, spills, leakage, accidents and bad practices (recycling of contaminated transformers).

5. The majority of stakeholders in Paraguay have limited understanding of risks posed by PCBs. Despite the efforts and awareness raising activities conducted during the NIP enabling activities, owners of PCB oils and PCB contaminated equipment and wastes are frequently unaware of the threats that PCBs pose to human health and the environment.

6. In most cases, PCB contaminated equipment is handled inappropriately due to lack of knowledge. This, combined with a weak national infrastructure and inadequate legislation results in a poor management of PCBs.

7. Concerning barriers, Paraguay has a weak institutional and regulatory infrastructure for the environmentally sound life-cycle management of PCBs, which results in poor compliance with the Stockholm Convention requirements, especially regarding PCB-related obligations. In recent years, Paraguay has made significant efforts to upgrade existing legislation and to assist PCB owners to comply with the PCB obligations stipulated in the Convention. However implementation and enforcement of this legislation is challenging. Additionally, Paraguay has drafted a bill to establish the mechanisms for environmental protection through the sound management of PCBs and electrical equipment. So, this project will provide Paraguay with an additional support to further upgrade their legislation/regulations.

8. Lack of awareness of national stakeholders results in poor PCB management practices leading to a negative impact on the environment and human health. It is often the case that ignorance of the effects of PCBs at all levels, from decision makers to informal sector, leads to poor PCB management practices. Communities that are unaware of the negative consequences of PCB might still recycle highly contaminated transformers and use the metallic parts without control. Similarly, decision makers who are not aware of the consequences of improper PCB management might still implement a programme for PCB maintenance that allows cross contamination.

9. Most government officials and workers from the electrical utilities have limited technical capacity and skills for the identification of PCBs. Similarly, laboratories are not adequately equipped for the analysis of PCBs. As a result, the preliminary inventory was partially tested using the Dexsil LX2000 as an indicative PCB test, however, a further PCB confirmatory test using gas chromatography was not performed due to the lack of resources and analytical capacity. This lack of capacity creates a problem for transformer owners, who do not know whether their pieces of equipment are contaminated or not.

10. One of the main issues of concern for electrical facilities is the replacement of PCB equipment. Transformers and capacitors with ages above 30 years are still in use. In most cases the replacement of such equipment is delayed due to the lack of resources. The replacement of PCB-contaminated transformers requires high investment, which in many cases is not economically attractive for companies.

11. Even when companies are aware of the risks associated with PCBs, lack of economic resources and

incentives might push them to delay required actions for sound management of PCB-containing equipment. In combination with the poor legislation and enforcement, PCB management is at the discretion of PCB owners.

12. The project will contribute to reduce exposure of humans and wildlife to POPs and other toxic substances, thus addressing the GEF-6, which deals with the phasing out of POPs and the reduction of POPs releases.

13. Further, the project is in line with the GEF-6 Chemicals and Wastes Strategy, whose long term goal is to prevent the exposure of humans and the environment to harmful chemicals and waste of global importance, including POPs, mercury and ozone depleting substances, through a significant reduction in the production, use, consumption and emissions/releases of those chemicals and wastes.

2) The baseline scenario or any associated baseline projects

Baseline scenario

14. The Paraguayan NIP highlighted the serious weaknesses of the current hazardous waste management practices and recommended institutional and regulatory development, capacity building, and public awareness in the area of POPs.

15. In particular, the NIP contains the following national priorities: (i) strengthening national capacity for POPs management (ii) development of a comprehensive PCB national inventory and elimination of known stocks (iii) establishment of an adequate environmentally sound management system for obsolete POP pesticides and (iv) development and maintenance of an effective public awareness programmes for the Paraguayan population.

16. The National Electricity Administration Entity (ANDE) is responsible for the generation, transmission and distribution of electricity in Paraguay. The national demand is covered by the electricity generated from three hydropower plants: Central Acaray (Property of ANDE), Central Yacyreta (Property of Paraguay and Argentina) and mainly from Central Itaipú (Property of Paraguay and Brazil).

17. The country produces 53,000 GWh/year, from which it consumes approximately 7,000 GWh/year, being the only country in the region that exceeds its national hydroelectric energy requirements. However, the consumption of hydroelectric energy represents only 10% of the national energy consumption. The biomass (wood, coal, fruits and grains peels, sugarcane remaining) represents the most important segment of national energy consumption (59%), followed by petroleum (30%) and the bio fuels at 1%.

18. The NIP notes that PCB-containing equipment is still being used in Paraguay, and its main owner is ANDE. According to the preliminary inventory undertaken in the course of the NIP Enabling Activities project, the in-service and surplus PCB equipment in the country represents a significant threat to the environment because PCBs are neither properly identified nor properly managed. The number of estimated power and distribution transformers in the electrical power sector in Paraguay is more than 64,000 units (in service and out of service) and 360 for transmission. During the NIP, 438 PCB-containing pieces of equipment in use were inventoried, from which 95.2% corresponds to electrical capacitors; 3.4% corresponds to transformers and reactors; and 1.4% to distribution transformers. Out of these 438 pieces of equipment, 421 were identified (not tested) as containing PCB and 17 as suspected. The transformers inventoried and identified as suspected were under repair and/or maintenance in Asuncion and San Lorenzo (Laurelty). The Laurelty site underwent a fire episode in October 2015 which resulted in destruction of about 6,000 obsolete distribution transformers which represents additional 300 tons of waste equipment contaminated with PCBs.

Baseline projects

19. After the NIP, Paraguay implemented a small pilot to analyse more transformers using the Dexsil LX 2000 as the initial screening method. Out of the 644 transformers tested, 186 units contained PCBs above 50 mg/kg. This result seems to indicate that about 30% of all transformers are contaminated with PCBs with concentration above 50 mg/kg. However, it is expected that when subjected to confirmatory analysis using gas chromatography, the number of equipment resulting positive will be lower than the results from the Dexsil LX2000 screening method.

20. To date ANDE has already analysed 5,000 damaged transformers (less than 10% of the total) and 147 transformers for transmission (40% of the total). This work has been made using funding from the Inter American Development Bank (IDB) and can be used for this project. However, the PCB inventory is not complete yet.

21. Paraguay has a regulatory framework related to PCB management. Law 567/95 endorses the Basel

Convention; Law 2333/04 ratifies the Stockholm Convention; Law 294/93 relates to the environmental impact assessment applied to all individuals, companies and activities using hazardous wastes. SEAM Resolution 1190/08 establishes measures to manage PCBs in Paraguay; and SEAM Resolution 1402/11 establishes protocols for the treatment of PCBs as part of the Implementation of the Stockholm Convention in Paraguay. These resolutions partially address management of PCBs, and the areas to be improved relate to the analysis, maintenance and replacement of equipment, among others. However, the regulatory does not address comprehensively address PCBs within a national framework of POPs and other hazardous chemicals.

22. Recently, Paraguay has drafted a bill to establish the mechanisms for environmental protection through the sound management of PCBs and equipment. This bill has not been endorsed by the government yet. Despite the enormous efforts made by the government and institutions to regulate PCBs, companies affected by these provisions need technical support and funding to address them. Additionally, enforcement and monitoring is a weak area that will need special attention and focus.

3) The proposed alternative scenario, GEF focal area strategies, with a brief description of expected outcomes and components of the project

23. The proposed project is designed to meet Paraguay's obligations under the SC, as it tackles a priority action from its first NIP, the phase out of PCB-containing equipment by 2025. The project seeks to address improper management of PCB in closed applications. It aims to assist the government in developing and implementing ESM systems for PCBs through strengthening the related national legal framework, creating national capacities to manage these POPs, , and conducting disposal/ treatment of POPs-containing equipment and wastes as well as awareness raising and trainings.

24. Component 1: Environmentally sound management and disposal of PCB-containing equipment, wastes and stockpiles

The main objective of this project component is to address health and environmental problems related to PCBs through capacity building and on the ground interventions. The three outcomes of this project component are:

Outcome 1.1. National PCB policy improved, capacity built and knowledge and awareness increased

Outcome 1.2. National PCB management plans ready for an smooth ESM and disposal of PCB-containing equipment and wastes; and, Outcome 1.3. ESM and disposal of PCB-containing equipment and wastes

25. Outcome 1.1. National PCB policy improved, capacity built and knowledge and awareness increased.

26. Output 1.1.1 National PCB legislation and regulations are in line with international standards

27. This project will be the establish 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. Special focus will be on the electricity sector companies that handle PCBs. National electricity sector companies be linked 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.

28. Output 1.1.2. National PCB management centre established to support PCBs owners to properly manage and dispose of PCBs and related wastes In order to create capacity in the country in a sustainable manner, a national PCB Management Centre will be established. The PCB Management Centre will include a group of technical stakeholders trained on different aspects of PCB management. This group of experts will then assist in establishing an efficient and cost-effective system to support PCB owners on any concerns/questions related to PCBs, from facility action plan development to implementation.

29. Output 1.1.3. National data system set and reliable analytical services strengthened to fully support inventory development and management of PCBs and related wastes, in line with international standards and best practices

30. The project will also reinforce the national analytical capacity, which will in turn contribute to updating and completing the PCB inventories. Apart from the preliminary NIP inventory there is no detailed national-wide PCB

inventory. ANDE has been started to analyze around 6000 equipments potentially contaminated with PCBs and up to now around 400 tons of PCBs have already been identified. Unfortunately, a fire occurred in October 2015 has resulted in additional 300 tons of PCB-wastes.

31. Output 1.1.4. Hazmat and risk management trainings conducted and awareness raised to reduced exposure of workers and the general public to PCB and related toxic wastes

32. Hazmat and risk management trainings and awareness raising for the general public and especially for workers will be conducted via face to face events and through online/downloadable training materials. Training and awareness raising will at least target 50 people from selected general public groups. The Hazmat component has been requested after the fire incident at the Laurely PCB-storage place in October 2015 and will focus mainly on the firefighters, and selected staff from SEAM and other relevant offices linked to emergencies.

33. The NGO Alter Vida will lead the awareness raising campaigns in the communities, and will participate in the training-of-trainers programme. Alter Vida has extensive experience in education on environmental programmes, has already participated in the NIP development and will make available its experience in working with specific groups.

34. Outcome 1.2. National PCB management plans ready for an smooth ESM and disposal of PCB-containing equipment and wastes: Under the proposed project, 10,000 transformers will be tested and properly labeled. It is expected that all large and medium sized transformers built with sampling valves will be tested, with the balance being out-of-service distribution transformers readily accessible in service distribution units.

35. Output 1.2.1. Inventory of at least 10,000 PCB-containing equipment units and PCB wastes carried out, including sampling oil and soils with sound analytical methodologies

36. ANDE is already conducting inventory activities and assigning significant resources to that effect. Similarly, the location of the storage facilities are already identified (in San Lorenzo and Asuncion) and will be provided to this project.

37. To complete the inventory, all potential PCB holders within the electricity sector, the oil and mining sector, and private companies will be included 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.

38. 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.

39. Output 1.2.2. ESM and disposal plan for PCBs developed, including cost-effective disposal plan

40. Prior to 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 700 tons of PCBs tackled by this project is required.

41. 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 Paraguay'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.

42. Output 1.2.4. Assessment of PCB/u-POPs pollution due to fire on ANDE PCB-storage facilities

43. On October 14th of 2015 a fire occurred at ANDE in San Lorenzo which affected a high amount of transformers and PCB-containing equipment's. An assessment of the surrounding PCB/ u-POPs pollution is essential to assess the scope of contamination.

44. Outcome 1.3. ESM and disposal of PCB-containing equipment and wastes: After the fire occurred at ANDE's Laurely site (San Lorenzo) the proposed project has been adjusted to treat up to 700 tons of PCB-contaminated transformers and capacitors both from among in-service and out-of-service equipment, including stored wastes and 300 tons PCB-contaminated equipment resulting from the fire. The analysis of alternative PCB treatment options (e.g. de-chlorination applied to contaminated transformers) will allow that the remainder of the PCB-contaminated transformers can be effectively and economically treated within the country.
45. Output 1.3.1. Current PCB interim storage facilities upgraded and operational
46. ANDE has existing storage facilities which are located in San Lorenzo and Asuncion. However, as mentioned, a recent fire might have destroyed parts of the storage facilities, and a re-assessment of the situation will be essential.
47. Output 1.3.2. At least 700 metric tons of PCB-containing equipment and waste disposed of and/or decontaminated
48. PCB phase-out in Paraguay will be achieved in three steps (i) development of a PCB disposal plan (for the project duration), (ii) phase-out of up to 700 tones (during the 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 700 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).
49. Component 2: Project Monitoring and Evaluation
50. Outcome 2.1. Monitoring and Outcome 3.2. Evaluation
51. Project monitoring and evaluation (M&E) will be conducted in accordance with UNIDO's established guidelines for conducting mid-term reviews and terminal evaluations of GEF-funded projects and GEF procedures. The M&E activities are defined under project component 2 and the M&E budget is in the Table 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 a monitoring and evaluation tool, and will be submitted three times during the duration of the project (CEO approval, mid-term and at project closure).
52. UNIDO as Implementing Agency will involve the GEF Operational Focal Points, national executing counterparts and project stakeholders at all stages of the project monitoring and evaluation to ensure that the results lead to improved current and future project design and implementation.
53. According to the GEF and UNIDO Monitoring and Evaluation policies, follow-up studies like country portfolio evaluations and thematic evaluations can be conducted. All project partners and contractors are obliged to (i) make studies available, and provide reports or other project-related documents, and (ii) facilitate interviews with staff involved in the project activities.
54. Monitoring responsibilities: Day to day monitoring of the national project implementation will be the responsibility of the NPCs who will report to the regional coordinator and UNIDO's project manager on a regular basis. The NPCs will prepare the Annual work plan, including indicators, in coordination with UNIDO's project manager and the regional coordinator (RC). The NPCs will also inform UNIDO of any delays or difficulties during project implementation so that appropriate and timely measures can be taken.
55. UNIDO, through meetings or exchanges with project counterparts, or as frequently as deemed necessary, but not less than semi-annually, will undertake periodic monitoring of the project implementation progress. This will allow parties to troubleshoot any problems pertaining to the project timely, to ensure the smooth implementation of project activities.
56. UNIDO will conduct periodic visits based on agreed schedules, to be detailed in the project Inception Report and each Annual Work Plan to assess project progress. Other members of the PSC and the PAC may also accompany these visits. A Field Visit Report will be prepared by UNIDO and will be circulated to the project team and the

Steering Committee members one month after the visit.

57. Annual Monitoring will occur mainly through PSC meetings, which will take place at least once a year.

58. Independent evaluation responsibilities: The project will undergo at least two independent external evaluations, a mid-term review and a terminal evaluation, as follows:

59. Mid-term review: An independent mid-term review will be performed by one or more independent consultant(s). The evaluation will assess progress made towards achievement of project objectives and outcomes, and will propose project amendments, if needed. The evaluation will focus on project performance in terms of relevance, effectiveness, efficiency and timely implementation. Findings of this evaluation will be incorporated as recommendations for further project implementation during the second half of project duration. The TORs for this evaluation will be prepared by UNIDO based on the generic TORs developed by the UNIDO and GEF Evaluation Offices.

60. Terminal evaluation: An independent final evaluation will be performed by an independent consultant after project completion, and will consider the outcomes of the mid-term review. It will focus on project results and impacts (e.g. in terms of global environmental benefits), sustainability and recommendations for follow-up projects. The TORs for this evaluation by UNIDO in accordance with the generic TORs developed by the UNIDO and GEF Evaluation Offices.

61. Project implementation report (PIR): is an annual progress document mandated by the GEF. The PIR includes the following (a) analysis of the achievement of project objectives, (b) analysis of project performance over the reporting period, including the resulting outputs and outcomes, (c) risk management, (d) accounting of co-financing. The PIR shall also constitute the annual project report, which is a UNIDO requirement for monitoring project management.

62. Prior obligations and prerequisites: GEF grant assistance will be provided to the counterparts subject to UNIDO being satisfied that obligations and pre-requisites listed below have been fulfilled or are likely to be fulfilled. When fulfilment of one or more of these prerequisites fails to materialize, UNIDO may, at its discretion, either suspend or terminate its assistance.

63. Prior to project effectiveness, financing by co-financiers other than the GEF and UNIDO must be specified in the project document and the respective commitment letters shall be made available to UNIDO.

64. The proposal directly relates to GEF-6 Chemical and Waste strategic CCM-2, Program 3: Reduction and elimination of POPs. Specific milestones of the Stockholm Convention will be targeted to meet the deadlines to complete replacement of PCBs contaminated oil and equipment with PCB-free units (2020), to complete the phasing out (2025), and for the destruction of PCB-containing oil and equipment (2028).

4) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing

65. Without this GEF-assisted project, PCB equipment will continue to be managed within the same operational scheme as non-PCB equipment giving rise to widespread cross-contamination. The threats posed by equipment at locations recognized in Annex A, Part II of the Stockholm Convention as presenting particular risks, will remain. Obsolete equipment will continue to be stored in inappropriate sites and to be disposed of carelessly to local waste handlers, principally for metal reclamation.

66. The GEF funding will be used to build national capacity and provide a comprehensive training with the goal of training a national team of experts on PCBs. GEF finance will also be used to upgrade a functional reference laboratory including training, bearing in mind that Paraguay is not part of the GEF Global Monitoring Plan project and that a well-established laboratory will be assigned to work on this project. The PCB inventory will be finalized and the existing PCB storage facilities will be upgraded. ANDE is already conducting inventory activities and assigning significant resources to that effect. Similarly, the locations of the storage facilities are already identified (in San Lorenzo and Asuncion) and will be provided to this project.

67. Regarding key roles, ANDE will make available its technical staff and facilities to ensure a successful project. Additionally, it will provide funding for the replacement of equipment and to continue the inventory work.

68. ANDE has also received a loan from the Inter American Development Bank (IADB) to continue the PCB identification and to improve the inventory, database, implementation, decontamination, disposal, improved infrastructure for management of equipment containing oils (without and with PCBs). This project will complement

the activities envisaged under the IADB loan and will work jointly on PCB identification and assessment of PCB management options.

69. Additionally, Paraguay has drafted a bill to establish the mechanisms for environmental protection through the sound management of PCBs and equipment. This instrument will assist Paraguay to meet the SC obligations on PCB by 2028, and the project will further assist Paraguay to accelerate the process of approval of the bill and will assist on its enforcement.

70. UNITAR is partnering with UNIDO to support Paraguay in the execution of the training and advisory components through provision of international technical expertise and experience relevant to the project.

71. During PPG additional efforts (e.g. through consultation workshops) will be carried out to identify additional co-funding sources.

5) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

72. The project will benefit both local communities nearby the PCB storage place and globally, through reduced impact of PCBs releases to the environment and avoiding long-distance transportation of PCBs.

6) Innovation, sustainability and potential for scaling up

73. The project will reduce PCB releases to the environment by upgrading existing legislation and supporting its implementation; it will also provide technical tools and training programmes to stakeholders, introduce best practices in the PCB management scheme, facilitate interim storage and disposal of PCBs in an environmentally sound manner. The project activities will be reinforced by the establishment of the national PCB Management Centre. The national PCB Management Centre will consist of a group of experts from different sectors (PCB owners, government, academia and NGOs) whose roles will be the oversight and advice on PCB management related matters. Members of the Centre will receive an intensive training and will be responsible to train other stakeholders outside the Centre (train-the-trainers model). The training of trainers will enable replication at the national level and beyond.

74. The Centre will also provide technical support and answer questions related to PCB management arising from PCB owners. The Centre will provide a detailed programme of action until 2028 including options of self-sustainability beyond the lifespan of this GEF project.

2. Stakeholders. Will project design include the participation of relevant stakeholders from [civil society organizations](#) (yes /no) and [indigenous peoples](#) (yes /no)? If yes, identify key stakeholders and briefly describe how they will be engaged in project preparation.

75. Management of PCBs includes a number of sectors and actors. Key stakeholders identified in the public and private sector, such as the Secretariat for the Environment (SEAM), Ministry of Industry, Ministry of Health, Ministry of Labour, and Ministry of Energy, will be encouraged to actively participate in the project. These ministries will participate, provide inputs and be consulted during project design. SEAM will execute the project at the national level with the assistance of skilled national and regional partners. ANDE and other utilities will play a major role in the project. ANDE is a decentralized public company of the electricity sector and has already analyzed PCB equipment at its PCB storage locations.

76. As PCB owners, ANDE and other companies will be encouraged to work jointly with government and other actors in the project and participate in project decision making processes through the PCB Management Centre.

77. Civil Society representatives, academia and ethnic groups will be also consulted on the decisions to be taken in the project and will be informed and consulted on progress made by it. The National Center of Toxicology along with the Ministry of health will provide basic information to be used for the awareness-raising strategy. The NGO Alter Vida will lead the awareness-raising process in the communities, and will participate in the training of trainers programme.

Stakeholder	Interest/ Expectations	Impact
ANDE and other Electrical Utilities	- Business investment and maintain or increase income	+
PCB maintenance companies	- Workers protection	

Recycling sector	<ul style="list-style-type: none"> - Getting training - Sound disposal/management option 	
National Government	<ul style="list-style-type: none"> - National policy development - Protection of human health and environment 	+
NGO	<ul style="list-style-type: none"> - Access to information - Participation in decisions that will affect communities - Training and awareness raising 	+
Academia	<ul style="list-style-type: none"> - Reinforcing knowledge and research - Access to training programme - Provide scientific basis and evidence for interventions 	
International Partners	<ul style="list-style-type: none"> - Regional policy coordination - Knowledge Management - Information Exchange - South-South cooperation - International training 	+

78. UNIDO will be the implementing UN agency for the project and UNITAR will be an executing agency that particularly will support the design and delivery of the training components of this project.

3. *Gender Equality and Women's Empowerment.* Are issues on [gender equality](#) and women's empowerment taken into account? (yes /no). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

79. Studies show that women relative to men tend to have smaller ecological footprints. Their production and consumption patterns are often more resource-efficient, as they are more likely to re-use, reduce and recycle. Also, they usually have more knowledge about their communities, the local ecosystems, and they make more sustainable decisions for their households and businesses. These factors will be taken into account during the entire project implementation, e.g. for the design of awareness raising campaigns.

80. The objective is to actively involve women in the management and establishment of ESM PCBs. In this respect the project will take into consideration UNIDO and GEF Gender policies during its formulation and implementation. GEF and UNIDO gender markers will be applied, and that the project shall be rated for gender relevance.

81. In line with UNIDO Gender Strategy, specific attention will be given to gender-mainstreaming throughout the project life cycle, e.g. (i) workshops (measured with indicators like: number of participants (by sex); number of gender-specific presentations; number of gender-specific and children-specific information materials); (ii) trainings (measured with indicators like: number of male/female trainees; number of gender-specific presentations; number of gender-specific information materials); (iii) gender-specific awareness-raising campaigns (such as campaigns targeted to women's groups; gender-specific information materials) and (iv) gender-specific technical trainings.

82. Additionally, since women and children are the most impacted from the adverse effects of PCBs, awareness raising materials specifically designed to facilitate women's participation in the project will be prepared. An assessment of the impact of PCBs in women and children will be conducted as part of the awareness raising and training materials.

4 *Risks.* Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).

83. Some potential risks could be identified at this stage. The below table summarizes the current risks and the proposed mitigation measures. However, a detailed risk analysis will be conducted during the PPG phase in close

cooperation with the main national stakeholders to ensure a better common understanding and the minimization of existing risks and the best formulation of the mitigation measures.

Risk	Level	Mitigation
Private owners would not report their PCB-containing equipment and wastes.	L	<p>The new legislation will require the reporting of PCBs and authorize the concerned institutions for on-site inspections. It will be enacted prior to the inventory exercise. Private enterprises will be informed about their obligations under the law.</p> <p>Subsidized disposal and treatment of PCB wastes and potential recovery of valued metals and mineral oil would help in overcoming PCB owners' reluctance to cooperate with the project.</p>
Technical staff, participating in the project implementation, and, in particular, having contact with PCB-contaminated equipment will be excessively exposed to PCB harmful influence.	L	<p>The technical staff will be trained on proper handling of PCB wastes and equipment. Relevant guidelines will be developed or adjusted and introduced at the technical project facilities and for the transportation teams.</p> <p>Protective clothes and equipment will be provided to the technical staff.</p> <p>Places for PCB-waste storage will be properly guarded to prevent admittance for non-authorized staff.</p>
Contamination of the environment during transport / handling of the PCB-containing equipment. There is a danger that some PCB-wastes could be disposed of illegally at unauthorized places, thus increasing environmental pollution and creating new "hot spots".	L	<p>The in-depth inventory will record locations, volumes, weights and other conditions of PCB-containing equipment and wastes. The project management team and the environmental authorities will be able to follow the disposal paths of the equipment and wastes until safe disposal.</p> <p>During PPG an Environmental and Social Management Plan (ESMP) will be established so that removal and transport to the dismantling facilities will be done following the requirements for safe handling of PCB wastes. Staff will be properly trained and specialized equipment will be provided.</p>

5. *Coordination.* Outline the coordination with other relevant GEF-financed and other initiatives.

84. Coordination with ongoing activities implemented by UNITAR is fundamental for the process to offer trainings and further research. Moreover, the relationship with other regional project counterparts will be enhanced in order to improve coordination of the activities in Paraguay.

85. UNIDO's comparative advantage lies in its mandate of promoting Inclusive and Sustainable Industrial Development (ISID) which stimulates competitive and environmentally sustainable industries. For the GEF, UNIDO's comparative advantage "is that it can involve the industrial sector in GEF projects in the following areas: industrial energy efficiency, renewable energy services, water management, chemicals management (including POP and ODS), and biotechnology." Moreover, UNIDO has a strong international network in the fields of PCB and is a member of the PCBs Elimination Network (PEN) where it also acts as observer at the PEN Council meetings.

86. UNEP is assisting Paraguay in updating its NIP for the Stockholm Convention. Close cooperation with UNEP's efforts in this regard will be ensured through frequent communication and information exchange.

87. The project will also coordinate activities and exchange experiences with the ongoing PCB activities in the region, such as the GEF-UNIDO ongoing projects for ESM of PCBs in Perú, Bolivia and Guatemala. Additionally, the project will access training and guidance materials developed during previous PCB projects in the region, such as the GEF UNEP project in Chile and Peru entitled: Best Practices for PCB Management in the Mining Sector of

South America, where training on action plan development and identification and analysis of PCBs took place. Also materials developed by the PEN will be used to avoid duplication of efforts.

6. *Consistency with National Priorities.* Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes /no). If yes, which ones and how: NAPAs, NAPS, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

88. Paraguay continues to address its obligations under the Stockholm Convention. It has completed and submitted its National Implementation Plan (NIP) on POPs in 2007 and is currently updating it to include the chemicals added to the initial list of POPs since 2009. Based on its NIP, the Government of Paraguay is conducting major efforts to address national priorities related to the management of POPs, particularly of PCBs, Dioxins and Furans. In this regard, ANDE, the main electrical utility in Paraguay, has identified transformers and capacitors that need immediate attention (those in critical conditions) and has developed a plan for sound management of such equipment. Part of this plan includes replacement of obsolete equipment and equipment containing PCBs.

89. The government of Paraguay promotes economic growth and welfare for its population through sound management of the national resources and improvement of access to electricity service in the country. This project is consistent with the priorities in the national agenda and related actions.

90. The GEF-6 Sound Chemicals Strategy has as major goal “to prevent the exposure of humans and the environment to harmful chemicals and waste of global importance, including POPs, mercury and ozone depleting substances, through a significant reduction in the production, use, consumption and emissions/releases of those chemicals and waste.” The proposed project will contribute the third programme namely “Reduction and elimination of POPs”. Therefore, the proposed project is in line with the above mentioned overarching goal of the GEF-6 Sound.

7. *Knowledge Management.* Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

91. Knowledge Management involves the understanding of where and in what forms knowledge exists; also, the organization’s needs of knowledge; the promotion of a culture conducive to learning, sharing, and building knowledge. The national stakeholders will be the custodians of this knowledge and, as repositories of it, they will be encouraged to learn and share their experiences with others stakeholders from the region, for their mutual benefit.

92. Lessons learned from UNIDO’s previous PCB projects will be incorporated into project implementation to ensure harmonization of the approaches within the national context. In line with the above, national knowledge will be shared within relevant stakeholder groups through workshops, trainings and frequent consultation meetings.

93. Legal Clause: “The Government of the Republic of Paraguay agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 7 October 1977 and entered into force on 29 June 1978.”



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

A. RECORD OF ENDORSEMENT⁹ OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):
 (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Ms. Karem Rocio A ELIZECHE GOMEZ	Directora de Planificacion Estrategica and GEF OFP	SECRETARIA DEL AMBIENTE - SEAM	03/28/2016

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies¹⁰ and procedures and meets the GEF criteria for project identification and preparation under GEF-6.
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Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Philippe R. Scholtès, Managing Director, Programme Development and Technical Cooperation (PTC), UNIDO GEF Focal Point		04/29/2016	Alfredo Cueva Jácome 	+431260265228	a.cueva@unido.org

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to the PIF.

⁹ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

¹⁰ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

