



REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title: Introduction of an environmentally sound management and disposal system for PCB wastes and PCB-contaminated equipment			
Country(ies):	The Republic of Indonesia	GEF Project ID: ¹	4446
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	120030
Other Executing Partner(s):	Ministry of Environment of the Republic Of Indonesia	Submission Date:	07/4/2013
		Resubmission Date	07/26/2013
GEF Focal Area (s):	Persistent Organic Pollutants	Project Duration(Months)	60 months
Name of Parent Program (if applicable):		Agency Fee (\$):	600,000
<ul style="list-style-type: none"> ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> 			

A. FOCAL AREA STRATEGY FRAMEWORK²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
(select) Chem-1	Outcome 1.4	Output 1.4.1	GEFTF	6,000,000	24,372,130
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
Total project costs				6,000,000	24,372,130

B. PROJECT FRAMEWORK

Project Objective: The project aims to (a) introduce and implement a PCB management system to reduce and/or eliminate releases from PCB wastes stockpiles and PCB-containing equipment and (b) dispose of at least 3,000 tonnes of PCBs wastes and PCB-containing equipment in an environmentally-sound manner maximizing opportunities for public-private partnership.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
1. Policy and Regulatory Framework	TA	Legislation and policies on PCB management, including incentive mechanism, adopted and endorsed to meet relevant obligations under the Convention	1.1 Policy and Regulatory framework reviewed, formulated and adopted. 1.2 Economic and market-based incentives proposed for disposal of PCB-containing equipment and wastes	GEFTF	150,000	600,000
2. Institutional capacity building and	TA	Strengthened institutional capacities	2.1 Capacity on PCB management built/	GEFTF	570,000	2,400,000

¹ Project ID number will be assigned by GEFSEC.

² Refer to the [Focal Area/LDCF/SCCF Results Framework](#) when completing Table A.

development		at central government and provincial level in selected provinces	strengthened among government staff in the central and provincial level. 2.2 Capacity built/strengthened , including laboratory capacity, to conduct extended inventory on PCBs in selected provinces covering at least Java island			
3. ESM of PCBs	Inv	ESM of PCBs through proper collection, packaging, registration, labelling, transportation, storage and disposal of targeted PCB wastes and PCB-contaminated equipment demonstrated	3.1 Operating entity (OE) selected 3.2 Pilot ESM system for PCBs established on the identified PCB owners sites 3.3 PCB treatment facility established and functional	GEFTF	4,700,000	16,972,130
4. Public awareness raising and advocacy campaigns	TA	Increased public awareness on issues concerning PCBs	4.1 Stakeholders engagement including NGOs and civil society established 4.2 Development and implementation of training and awareness raising programs	GEFTF	150,000	1,800,000
5. Monitoring and Evaluation	(select)	Effective project monitoring and evaluation implemented	5.1 M&E mechanism designed and implemented	GEFTF	130,000	800,000
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					5,700,000	22,572,130
Project management Cost (PMC) ³				GEFTF	300,000	1,800,000
Total project costs					6,000,000	24,372,130

C. SOURCES OF CONFIRMED CO-FINANCING 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 (\$) ²
National Government	Ministry of Environment	Grant	1,000,000
National Government	Ministry of Environment	In-Kind	2,590,000
National Government	Agency for the Assessment and Application of Technology (BPPT)	Grant	154,830
National Government	Agency for the Assessment and Application of Technology (BPPT)	In-Kind	762,542

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

National Government	PT PLN (Persero) HQ (government-owned electrical utility company) ¹	Grant	17,305,277
National Government	PT PLN (Persero) Research and Development Unit	Grant	100,040
Private Sector	PT Krakatau Daya Listik	Grant	903,123
Private Sector	PT Krakatau Daya Listik	In-Kind	1,063,410
Private Sector	PT Freeport Indonesia	Grant	56,500
Private Sector	PT South Pacific Viscose	Grant	21,408
GEF Agency	UNIDO ³	Grant	165,000
GEF Agency	UNIDO	In-Kind	250,000
Total Co-financing			24,372,130

¹ Reflects only direct financing for PCB transformers replacement and PCB disposal budget.

² Based on February 2013 UN Exchange rate

³ Sourced out from GEF-PTC Facility funds. Values reflected in the PIF amended to reflect actual funds allocated for project implementation.

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) ²	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
Total Grant Resources				0	0	0

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

² Indicate fees related to this project.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	595,000	125,000	760,000
National/Local Consultants	327,000	817,500	1,144,500

G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? (Select)

(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 PIF⁴

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.

Information presented in this document builds on those provided in the PIF. Minor amendments have been made to further

⁴ 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

strengthen and elaborate certain components. Components 3 and 4 were merged to define environmentally sound management and disposal of PCBs as a single component. Outputs under these components were likewise restructured. Monitoring and Evaluation component was added to fully reflect the importance of these elements in the successful implementation of the project.

Further elaboration of the PIF elements is provided in the following section:

1. The National Implementation Plan (NIP) for the Stockholm Convention of the Republic of Indonesia identified phase-out and disposal of PCBs as one of the top priorities requiring immediate attention and action. The rationale and objectives of the project originate from the priorities and key objectives established by the NIP: (i) Establish regulation on PCBs containing equipment; (ii) Measure PCBs contamination, especially in mining activities, industrial zones and power plant, ships and vessels; (iii) Strengthen capability and capacity of infrastructure as well as human resources; (iv) Environmentally sound management of PCBs containing equipment and waste; (v) Ensure destruction of PCBs and PCB-containing equipment in an environmentally safe manner according to best available techniques/best environmental practices (BAT/BEP) and increase the number of destruction facilities based on geographical consideration and; (vi) Public awareness raising on PCB impacts to human health and the environment.
2. The new Medium-Term Development Plan for Indonesia (RPJMN) 2010-2014 focuses on equity. The President has characterized the goal of the RPJMN as 'development for all', with no groups left behind, as Indonesia moves along the path to high-level MIC status and consolidates its democratic political system. The RPJMN is an inclusive development strategy for wealth creation at all levels of society, based on equity, justice and diversity. It has a strong territorial dimension, placing emphasis on the development of regional capacities within an integrated national economy. The plan also promotes the development of human resources, talents and skills by focusing on improvements in access to and quality of education, health, social protection and living conditions for the most vulnerable.
3. The RPJMN identifies 11 national priorities, including environment and disaster management and three cross cutting principles, which are: 1) politics law and security; 2) economy; and 3) people's welfare. The RPJMN also calls for three mainstreaming perspectives as the operational foundations of overall development implementation, namely: 1) sustainable development mainstreaming; 2) good governance mainstreaming; and 3) gender mainstreaming.
4. Within this overall framework, the United Nations Partnership For Development Framework (UNPDF) identifies three objectives all aimed at making development work for the poor and vulnerable. These are: (i) Enhance EQUITY in access to benefits, services and economic opportunities for improved sustainable, productive and decent livelihoods (ii) Promote effective PARTICIPATION and protect the rights of the poor and vulnerable and; (iii) Strengthen national and local RESILIENCE to climate change, threats, shocks and disasters
5. In light of the three objectives described above, 5 outcomes and 11 suboutcomes have been identified for the UNPDF 2011 – 2015 as targets for UN support in Indonesia. PCB management and destruction activity is covered under Outcome 5: Climate Change and Environment of the UNPDF. The outcome aims at strengthening climate change mitigation and adaptation and environmental sustainability measures in targeted vulnerable provinces, sectors and communities. In alignment with the Government's plans, UN agencies will work with the central government to guide policies and actions on climate change, environmental security, and disaster management, while promoting the South-South cooperation modality. This will be complemented by partnerships with local governments and communities in selected high-priority regions to ensure that vulnerable groups are aware of and engaged in environmental issues. In order to promote green economic development, UN agencies will furthermore support innovative and replicable approaches in the areas of waste management, cleaner and resource efficient technologies, energy efficiency and renewable energy.
6. The PCB management and destruction activity will contribute to the reduction and elimination on POPs (Stockholm Convention on POPs) which is an indicator of the output *Policy/legal/institutional framework strengthened for implementation of major MEAs and so maintain key ecosystems, biological diversity, and sustainable management of natural resources*, under Sub-Outcome 11: *Strengthened capacity for effective climate change mitigation and adaptation, including ecosystems and natural resources management and energy efficiency* and Outcome 5 of the UNPDF document.

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

7. The proposed project is consistent with GEF-5 Chemicals FA 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*". The project is focusing on the environmentally sound management (ESM) of PCBs and will directly and indirectly activate funds and investments for the safe control, management and disposal of PCBs and PCB-containing equipment and waste in the country. Sustainability is ensured through the involvement of PCB owners and private companies providing services for collection, transport, interim storage and final disposal under the control of responsible governmental institutions in the frame of relevant legislation taken into force.

A.3 The GEF Agency's comparative advantage:

8. UNIDO has extensively carried out projects in the POPs focal area of GEF and strong comparative advantage in providing technical assistance on the ESM of PCBs. UNIDO has built a solid portfolio in the area of PCB management comprising about 35% of current post-NIP projects. These include successful implementation of PCB projects in Armenia and Romania. It also has an ongoing PCB portfolio in Macedonia, Mongolia, Philippines, Azerbaijan, Peru, India, Nepal, Morocco and Russia.
9. In general, UNIDO's PCB management and disposal projects aim to create fundamental capacities within government, institution and PCB owners to comply with the PCB-related obligations under the Stockholm Convention on POPs. The projects enhance the regulatory and legislative infrastructures and strengthen institutions at national and local levels to manage PCB-containing equipment and waste in an environmentally sound manner. Building capacities in local laboratories for PCB sampling and analysis, transfer of technology know-how for local PCB treatment and elimination and undertaking inspections at PCB-contaminated sites assures compliance to the PCB-related legislations. Environmentally sound PCB management practices are put in place at PCB-owners reducing PCB releases and risks to human and environmental health. Raising targeted public awareness and dissemination of information is a major component of all UNIDO PCBs projects.
10. The project will be implemented by UNIDO HQ with the support of the UNIDO Country Office in Indonesia and the Ministry of Environment as the lead government agency ensuring full coordination and timely implementation of the project. UNIDO is represented in Indonesia by competent staff knowledgeable in the area of environmental protection and is fully supported by the relevant Ministries in the country working together to ensure the protection of the environment and the health of the citizenry. Thus, commitment of these sectors guarantees the successful implementation of the project.
11. UNIDO plays a leading role in the implementation of the Stockholm Convention on POPs, assisting developing countries and transition economies to meet their obligations to the Convention. The organization focuses on the provisions of the Convention that are directly related to the industrial development sector and provides technical assistance based on environmentally sustainable approaches including POPs pollution reduction/elimination, industrial process changes, modified or substitute materials and products, BAT/BEP and ESM of POPs chemicals.

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

Baseline Situation:

a. Overview

12. Republic of Indonesia signed the Stockholm Convention on POPs on 23 May 2001 and ratified it on 11 June 2009. The GEF project "*Enabling Activities to facilitate early action on the implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs) in Indonesia*" was successfully implemented through UNIDO and the country's NIP was submitted on 15 April 2010. The NIP has established the baseline situation in terms of POPs issues in the country including preliminary inventories of POPs chemicals and respective action plans and strategies for the fulfillment of the country's obligations under the Stockholm Convention.
13. Based on the preliminary PCBs inventory conducted in 2004, it showed that approximately 6% of the electrical equipment contained PCBs and 17% of them are highly contaminated. From the preliminary survey during the NIP preparation, it is estimated that there are 23,000 tonnes of PCB contaminated oil in transformer equipment in Indonesia. The action plan for PCBs is targeting phase-out and disposal of PCBs until 2020. According to the NIP, the use of equipment containing PCBs >0.05% and volume 5 liters should be banned before 2018 and for equipment containing PCBs >0.005% and volume >0.05 liters should not be used from the year 2020 thereon. During the PPG phase, the inventory figures were validated and some errors in the calculations were found correcting the estimate provided (please see Annex B). It was also apparent in the field surveys conducted that many of the PCB owners lack of awareness and capacities for the environmentally sound management and disposal of hazardous wastes.
14. Results of the inventory on PCBs and equipment containing PCBs in 2004 showed that (i) there was no export, import, and production of PCBs as chemicals in the year 2000, (ii) PCBs in closed-system equipment (transformers and capacitors) were found, mainly in equipment made before 1985, (iii) inventory on PCBs in semi-closed and open systems has never been conducted, (iv) the community, the owner, and the collector of equipment containing PCBs were not aware of the negative impact caused by PCBs, (v) equipment containing PCBs in ships made before 1970s (for example, dredge ships) were still in use, and (vi) facility for PCBs waste destruction was limited and was considered costly by the equipment owners, and the existing destruction facility still used combustion technology.
15. An overview on existing condition and practices regarding PCBs disposal in Indonesia maybe summarized by the following

observations:

- i) PCB-containing equipment (transformer and capacitor) are not easily identified and clearly seen whether it is PCB-free or “pure” PCBs, mostly because the nameplates are already weathered out in more than 40 years since the equipment was installed for service, especially those located outdoor.
 - ii) It is difficult to get information whether the suspected equipment has been retrofilled and there was no information on the disposal of the PCBs waste. This is due to workers’ lack of awareness on the hazardous characteristics of PCBs. In short, there is no record data on PCBs stockpile and wastes. As for now they treated the transformer oil together with other used oil and they paid the third party for the disposal. There is also informal information that the used transformer oil are sold and used as lubricant and as fuel.
 - iii) Some owners of PCBs-containing equipment, which are aware of the hazardous characteristics of PCBs, put the inactive equipment in a particular shed for hazardous materials (such cases in PT Goodyear, PT South Pacific Viscose, PT Krama Yudha, and PT Total). These companies comply with ISO 9000 series that require that all transformers are PCB-free. The important safety measures in interim storage include labeling, temperature control, and containment tank for in-service transformers containing PCBs have been practiced (case in PT Goodyear). The owners usually wait for the instruction from their head office on how to eliminate the equipment (cases in PT Goodyear and PT Total).
 - iii) PT PPLI is the only establishment that has experience and is licensed to transport B3 wastes, including PCBs-containing equipment and waste. CFR 40 – Part 761.60 Section of USEPA was followed for PCBs handling including thermal technology to handle the PCBs waste. The PCBs waste was blended with other oil to produce synthetic fuel, which was used in the cement kiln to displace virgin product fuels. The maximum PCBs content to be incinerated was 1000 ppm. The residence time was 7 sec during the thermal destruction of PCBs inside the cement kiln was 7 sec above the US-EPA requirement (2 sec) for PCBs destruction using thermal treatment. However, there is no more PCBs elimination by PT PPLI since about early 2000.
16. PLN (State Electricity Company), a government-owned corporation and a subsidiary of the Ministry of Energy and Mineral Resources (MEMR), was reported to own the largest number of transformers which maybe contaminated with PCBs. PLN has the monopoly on electricity generation, transmission and distribution in Indonesia. At the end of 2011, PLN's generating capacity was estimated at around 28,500MW.
17. During the project preparatory phase, the Ministry of Environment in coordination with MEMR, strongly sought the participation of PLN in the project and held several discussions with the technical staff and higher officials of the company. As a result, actual field surveys and analyses were conducted in several PLN-owned premises providing in-depth information on the quality and quantity of its PCB-contaminated transformers.

b. Regulatory Context

18. Indonesian Law No. 23/1997 on Environment Management gives authority to the Ministry of Environment (MoE) to manage the environment at the central and regional levels. The management of environment includes controlling and developing of policies in utilization of natural resources, controlling activities that cause social impact, including management and control of hazardous and toxic materials (B3) and the wastes. To implement the law, GR (Government Regulation) Nr 74/2001 on management B3 has been enacted. This regulates the prohibition of use of 10 POPs chemicals in Indonesia, including PCBs. In addition, decree of the Head of Bapedal Nr Kep-03/Bapedal/09/1995 on technical requirements for B3 waste processing has stipulated regulatory limits in efficiency of destruction and removal of POPs. However, there is no specific regulation yet for PCBs disposal.
19. Present regulations pertaining to PCBs: (i) GR No. 74/2001, stating that PCBs are categorized as B3 that is prohibited. PLN and Pertamina also prohibited the use of PCB; (ii) GR Nr 18/1999–GR Nr 85/1999 on the Management of Hazardous and Toxic Materials; (iii) Ministerial Regulation Nr 18/2009 on procedure to obtain permit on the management of B3 covering the ban of PCB use. The country recognises the need to review and develop policies and regulation specifically targeting PCBs. The baseline project includes the assessment and improvement of the effectiveness of the laws and policies relating to PCBs.
20. Supporting regulation that can be adopted to prepare guideline for PCBs disposal: (i) Symbol and label for B3 waste are regulated in the Decree of the Head of Bapedal Nr 05/Bapedal/09/1995; (ii) Procedure and technical requirement for storing and collecting B3 are stated in the Decree of the Head of Bapedal Nr 1/Bapedal/09/1995; (iii) Documenting B3 waste is regulated in the Decree of the Head of Bapedal Nr 2/Bapedal/09/1995; (iv) Technical requirement for B3 waste management is stipulated in the Decree of the Head of Bapedal Nr 3/Bapedal/09/1995; (v) Procedure and requirement for stockpiling of waste treatment results, requirements for former waste treatment location and former locations for stockpiling B3 wastes are stated in the Decree of the Head of Bapedal Nr. 4/Bapedal/ 09/1995.
21. Based on the available national policies, conflict between economic orientation and environmental development in Indonesia in general is realized. The MoE (2004) stated some factors that hamper the implementation of environmental policies, namely (i) Structural obstruction, mainly in regard to acceptability of the Ministry intervention to the relevant sector; (ii) Weak enforcement of national laws; and (iii) Weakening of national law implementation in the field due to autonomous regional policies.
22. National regulations allow the use of co-processing in cement kilns and incineration to destroy hazardous wastes in

Indonesia. However, there is concurrence among PCB owners that these technologies are expensive. A feasibility study will be conducted to ascertain the viability of these technologies and other technology options for PCB destruction during the project implementation phase.

BASELINE PROJECT

23. To meet the project objectives and the country's obligations to the Stockholm Convention, Indonesia has implemented several initiatives through national budget commitment. As a follow-up to the endorsement of the NIP in July 2008 and the issuance of Law Nr 19/2009 on the ratification of the SC, MoE has started action on the need to further strengthen their regulations on POPs in general. The NIP binds the commitment of several ministries in addressing the issue of PCBs, in particular: the MOE, Ministry of Health, MEMR, Ministry of Industry, Ministry of National Education and Culture and the Ministry of Transportation (concerning transport of regulated goods). As part of the baseline project, the GoI, through the Ministry of Environment, will form a task team to review the relevant regulations related to PCBs, formulate policies and directives for PCB management and map out an enforcement plan that will meet the 2020 target for PCB phase-out in the country.

24. To build institutional capacity in the country on the management of PCBs, MoE plans to strengthen the analytical and human resources available at PUSARPEDAL (Environmental Impact Control Center of Indonesia). PUSARPEDAL is a facility under the Ministry of Environment which provided environmental test result data for use in environmental management. It also serves as a training center for Indonesia's local government authorities. PUSARPEDAL will allocate infrastructure and human resources on PCB monitoring and analysis which will be strengthened by the GEF project. In turn, the institution will provide technical expertise in the conduct of training to local authorities in order to ensure that information and knowledge is disseminated and shared to relevant stakeholders.

25. Also under Component 2, the Government of Indonesia published a bid in 2010 for IDR 300M (around USD30,000) for the conduct of a national inventory for PCBs as part of the action plan reflected in the NIP. The bid covers the identification of the volume of PCB oil, PCB contaminated equipment and PCB contaminated sites. The invitation to bid was posted in the MOE's website for 2 weeks but no proposal was received. A second posting was made and only one unqualified supplier submitted a proposal. MOE concluded that the bid was unsuccessful because the posting was too short and the financial package being offered (USD30,000) was not attractive enough for suppliers. MoE will pursue the same activity during the project implementation with their initial budget supplemented by the GEF grant and the period of proposal submission will be lengthened. As a preparatory activity for the inventory, MoE will also invite targeted industries for coordination meeting and to respond to survey questionnaires. Around 30 targeted industries were identified based on the information in the NIP and other supporting information. MOE shall conduct facility visits to validate the data provided by the industries. Accordingly, the baseline project, with the support of the GEF, will provide a more comprehensive and multi-matrix inventory of PCBs in the country.

26. For Component 3: ESM of PCBs, the baseline project has been strengthened by strong commitment from PCB owners as evidenced by the co-financing secured during the PPG. PT PLN (State Electricity Company) and its Research and Development Unit, through the guidance of the MoE, will conduct an in-depth inventory of its PCB stockpiles and will design a PCB phase-out plan to meet the 2020 deadline of the NIP. PT PLN has committed significant co-financing to (i) allocate resources (human, technical and infrastructure) for PCB management in their facilities; (ii) conduct extensive inventory in all PLN's premises; (iii) replace PCB or PCB-contaminated transformers to comply with the phase-out deadline; (iv) support the pilot on the ESM of PCBs through proper collection, packaging, registration, labelling, transportation and storage of PCB wastes and PCB-contaminated wastes and equipment.

MoE has also generated strong support from private PCB owners which have allocated funds and resources to support the objectives of the project. It is planned that the MoE will continue to involve the private sector and solicit their participation in the project activities. The baseline project foresees the strong participation and commitment of the PCB owners. Through strengthened technical capacities on and awareness on the handling of PCBs, the baseline project envisages the following activities (i) self-inventory of PCBs; (ii) building of storage facilities inside the respective industry/factory area; (iii) establish in-house PCB management systems; (iv) supervision of staff to comply with the government regulations; and (v) provide grant and in-kind support to the operations of the selected PCB destruction technology. The MoE commits to assign its staff to monitor the operations of the facility and ensure that proper safeguards are in place. PUSARPEDAL, which is also under the MoE, will be tapped to provide services for the analytical needs of the project especially, in verifying the destruction efficiency of the technology.

27. On public information and awareness raising, MOE, after ratifying the SC, allocated national budget to their work on POPs. At least nine (9) general awareness raising workshop and trainings on POPs including PCBs have already been conducted. Coordination meetings with MEMR, PLN (electrical company), MOI and other stakeholders were organized as a preparatory activity for the PCB proposal. The baseline project supports awareness raising and information campaigns dictated by available resources. A stronger and wider IEC is envisaged during the project implementation through the support and assistance of various ministries including the Ministry of Health, Ministry of National Education and Culture and the Ministry of Women and Children
28. It is evident that the Government of Indonesia has committed financial, human and institutional resources to protect human health and environment from POPs. The GEF project is envisaged to provide the resources in filling the gaps and to deliver an overall sound management of PCBs. In principle, the GoI has indicated the need for technical assistance on (i) enhancing technical and human capacity for PCB inventory (ii) ESM of PCB-contaminated equipment and wastes; (iii) PCB disposal facility, evaluation on technical options suitable for Indonesia considering wide geographical area and high investment cost and; (iv) strengthening policy and regulatory framework specific for PCB, based on the pilot on ESM for PCB and development of PCB disposal facility under the project.

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:

The GEF PROJECT

30. The project will assist the country to establish ESM of PCBs focusing on the most industrialized provinces and a pilot site, which will allow the country to disseminate and replicate best practices for PCBs management and disposal. ESM of PCB will include the identification, collection, packaging, registration and labeling system at the respective factory/industry, transport, safe interim storage and disposal of PCB-containing equipment and waste. The overall objective of the project is to eliminate the use and releases of PCBs in the environment through the introduction of ESM and to dispose of at least 3,000 tonnes of PCB wastes, PCB-contaminated oil and equipment
31. The GEF project has 4 major components which provides a holistic framework to introduce environmentally sustainable management of PCBs, PCB-contaminated equipment and wastes in the country. The components include (1) Strengthening of policy and regulations; (2) Institutional capacity building and development; (3) ESM of PCBs and (4) Awareness raising and information dissemination. Effective monitoring and project evaluation will ensure the successful achievement of the desired project outputs.
32. Component 1 focuses on the review, formulation and enforcement of policies or regulation directly relevant to PCB management in the country. The GEF project is envisaged to assist in the formulation of the following: (i) Policies on investment, tax, and custom to encourage the use of imported alternative safe technologies; (ii) Policy to put code/label on equipment free of PCBs and those containing PCBs; (iii) Policies for inspecting and monitoring PCB disposal and; (iv) Policies to restrict expansion of industries not implementing BAT/BEP in reducing releases of POP ; (v) Guidelines on ESM and disposal of PCB wastes and decontamination of PCB-contaminated oil and equipment. As part of the output for this component, economic and market-based incentives will be proposed (possibly in the form of subsidies, tax breaks, etc.) that will encourage the participation of PCB owners in the country. Memorandum of understanding should also be established amongst MoE, MEMR and PCB owners to ensure that the PCB are managed and disposed in an environmentally-sound manner. Market analysis on the cost of testing and disposal options will be conducted and incentive scheme will be developed and proposed. Financial implications/assessment of the proposed scheme will be done to ascertain its sustainability. Policies and incentives are deemed necessary as:
- i) Currently, Indonesia does not have suitable technologies for the treatment and disposal of PCBs and other POPs. Industrial incinerators do not have the specifications nor the air pollution control system necessary to dispose of these materials. The cement kiln, in operation in Indonesia, does not have the capacity to destroy the PCB inventory has and neither has the proper air pollution device necessary for PCB treatment. Without proper legislation, investors that maybe interested in developing needed alternatives would not have the assurances that owners of the PCB wastes would dispose of these materials using suitable technologies. The country needs policies that will ensure proper management and economic disposal of PCBs.
- ii) PCB containing transformers, unless they are faulty, are reliable and stable pieces of equipment being used in the electrical utility industry. Although some newer transformer may have better performance, replacing PCB transformers does not offer any economic advantages. In addition to the cost of the PCB contaminated transformers, owners also have to bear the cost of buying and installing new equipment. In addition, the inconvenience of interrupting the supply of electricity to their customers has relative cost to the company. The

additional tax incentive or subsidies proposed in the project may help PCB owners to accelerate the removal and disposal of PCB transformers.

33. Under Component 2, capacity building efforts will address the needs of government officials at central and provincial levels as well as managers and workers at state-owned (PLN-electricity company, PERTAMINA-oil company, etc) and private entities (industry, transformer manufacturers, transformer service provider, relevant association, NGO, etc). The following training activities are envisaged: (i) intensive training on PCB management will be provided by international experts to a core group of government staff at the central and provincial levels to ensure that the health and environmental impacts of PCBs, how to identify PCB and how to formulate policies and code of practice and the adoption of such is learnt; (ii) Training on inventory and analysis will be provided to PUSARPEDAL staff and the inventory team for the conduct of proper sampling, analysis, inventory and data analysis; (iii) A comprehensive training on the whole cycle of ESM of PCBs shall also be properly disseminated among PCB owners including the conduct of inventory, proper registration, labeling and storage of PCB wastes and PCB contaminated equipment will be delivered to a core group of PCB owners, transformer maintenance staff, transformer manufacturer and other relevant stakeholder. This will also include the establishment of mechanism in industry to prevent leakage and cross contamination, safe handling and storage of the equipment in the industry site. This working group is expected to train and disseminate the knowledge gained to their relevant colleagues.
34. As part of the outputs for Component 2, technical and human resource capacity of laboratories, particularly of PUSARPEDAL and those of PLN will also be enhanced to enable the conduct of an extended inventory in the country. Based on the NIP, currently, no laboratory in the country is accredited to analyze PCBs. A PCB inventory team will be established to undertake the task in selected provinces covering at least the Java Island. PLN covers 3 areas under different sub-companies - Western Indonesia, Java-Bali and Eastern Indonesia. The largest among the 5 big islands of Indonesia and most populous area is Java-Bali and is considered as a priority. In 2010, the maximum load in the Java-Bali division is 19,700MW and an installed capacity of 29,268MW. Considering this huge amount of power requirement, it is essential (and logical) to focus the inventory exercise in this area. The Java-Bali area consist of the following provinces where an extended inventory will be undertaken: Jakarta Greater Are, West Java, Central Java, Special Jogyakarta Area and Bali. During the first year of the project, MoE, together with PLN, plans to conduct an inventory of the electrical utilities in the Java-Bali area.
35. During the project conceptualization, an indepth review of the estimation of the total weight of PCB contaminated oil in the Second Phase Report on "Enabling Activities to Facilitate Early Action on the Implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs) in Indonesia", Part I revealed that the calculation contained a mistake that resulted in an overestimate. In page 16 (English version), the number of transformers dated before 2004 was estimated to be 1838 pieces. This is 44.1% of the total 4171 units owned by the respondents to the questionnaire. On page 14 of the document, the results given from the quantitative PCB tests on 35 transformers show that 8 transformers (2 units containing PCBs between 70 and 400 ppm and 6 containing PCBs in the range of 0.13 to 0.32%). The 8 contaminated transformers represent 22.8% of the tested population. Table 3.3 gives an average total weight of the transformers to be 7385 kg. With an estimated weight equivalent to 1/3 of the total weight of the transformer being oil, the average amount of oil in each transformer is estimated to be 2462 kg/unit.
36. Based on the 22.8% of the transformers found to contain PCBs above 50 ppm, the total number of transformers in Indonesia to be suspected of containing PCBs above the 50 ppm is $1838 \times (22.8/100)$ or 419 pieces. With an average amount of oil of 2462 kg per unit, then the amount of PCB contaminated oil in the 419 units multiply by 2462 or 1,031,578 kg. As it was assumed that the 1838 transformers represents only 20.2% of all transformers in Indonesia, then the total amount of PCB contaminated oil in the country becomes $1,031,578 \text{ kg} \times (100/20.2)$ or 5,106,731 kg. Thus, the total amount of PCB contaminated oil from transformers in Indonesia is 5,106,731 kg and the total weight of PCB contaminated transformers is $(1/3) \times 5,106,731$ or 1,702,244 kg. Based on this corrected assessment of the total amount of PCB contaminated transformers of about 15,320 tonnes and 5,106 tonnes of contaminated oil, the 3000 tonnes of PCB containing material to be treated by the project represents only about 15% of the national inventory. The GEF funding is expected to catalyze PCB management initiative in the country. While the MoE has put budget on the issue of POPs management, disposal of PCBs and PCB-contaminated equipment remains to be a major issue that needs to be addressed through international assistance. It is envisaged that the project will deliver the required technical skills and transfer a practical technology to run a facility that will be able to address the remaining stockpile in the country..
37. Component 3 of the project framework addresses activities to be undertaken to demonstrate environmentally sound management and disposal of PCBs. ESM of PCBs will be demonstrated through proper collection, packaging, labelling, registration, transportation, storage and disposal of targeted PCB wastes and PCB contaminated equipment. Using the data generated from the extended inventory and under a broad stakeholder involvement, a detailed PCB phase-out plan will be developed for the prioritized provinces given above, and if possible, a country-wide plan will be mapped out. The inventory will also provide records on PCB-contaminated oils and PCB wastes which maybe directly disposed of. Proper labelling and registration of the wastes to be prioritized for treatment should likewise be carried out.

38. Strategies for priority setting will be established and applied inviting all relevant stakeholders into the decision-making process. Cooperation between involved provinces will be of utmost importance for proper assessment of priorities and strategy for economic and market based solutions for final PCBs disposal.
39. The importance of the role and functions of an operating entity for the PCB treatment facility cannot be overemphasized. In order to carry out the disposal of the 3000 tonnes of PCB material, it is envisaged that the project will acquire a PCB treatment system. It is expected that this PCB treatment system will be sited in Indonesia and operated by a partner Operating Entity (OE). The following are some of the criteria for the selection of the OE: (i) existing waste disposal site; (ii) license to operate a hazardous waste facility; (iii) experience in handling toxic wastes including PCBs; (iv) availability of investment capital; trained and experienced operators; (v) provision of comprehensive services including packaging, transport and disposal of hazardous wastes and; (vi) clean track record and free from penalties resulting from environmental infractions. It is expected that an EIA will be undertaken in the site selected and on the facility which maybe built for decontamination/disposal of PCBs. During the PPG, several institutions have been identified as possible candidates. However, the final selection of the operating entity will be done by UNIDO together with the MoE and other relevant agencies or institutions in the country considering the criteria set and the country's policy.
40. During the PPG phase, it was determined that the country has entities that can support transport of PCB wastes. Thus, it was agreed that the construction of interim storage sites is unnecessary. ESM of PCB wastes and PCB-contaminated equipment will be applied in the location of the wastes/equipment owners itself. Transportation protocols will be developed to ensure that geographical and climate risks are taken into consideration. UNIDO and MoE will ensure that only licensed transporters /handlers will be contracted for the corresponding transport of the PCB wastes from the storage site to the disposal facility.
41. Based on the identified needs and the priorities set, a proposal for PCB disposal will be developed to address environmental and safety requirements and also economic and market conditions. A indepth study will be done based on the inventory results and the baseline scenario assessment which will include cost-benefit analysis, comparison of different scenarios for final disposal and destruction. While several technical options are available and fully evaluated by experts, their applicability to the nature and quantity of wastes to be addressed in Indonesia should be studied. If considered practical as a result of the study, upgrade/retrofit of existing disposal facilities to conform with environmental standards maybe undertaken. Also, one of the factors to be considered during the study is the possibility of the disposal option to destroy other POPs wastes. For some non-combustion technologies, varying operating parameters may deem the disposal option applicable to other POPs wastes.
42. Based on the result of the study, a final disposal strategy will be adopted in agreement with key stakeholders and provinces under the lead coordination provided by the central government. Selection of the disposal technology and correspondingly, the overall ESM system for PCBs to be established in the country will also consider the guidelines and guidance published by the Stockholm/Basel and the GEF. At least 3,000 tonnes of high and other range of concentration of PCBs and PCB containing equipment and wastes will be destroyed during the project execution.
43. It is understood that there is no single technology that would be able to economically and practically address all PCB wastes streams - low and high concentration PCB oil, pure PCBs and PCB-contaminated equipment and solids (wood and paper in transformers). It is, therefore, necessary that a good disposal plan be mapped out to realistically optimize the grants provided for the project.
44. Throughout the project implementation, public awareness raising and involvement of interested NGOs and other organizations will be ensured under Component 4. The successful implementation of the project will provide a solid basis for sustainable management and destruction of PCBs and PCB containing equipment in Indonesia. Provinces not directly benefiting from the project investment activities will be invited in all relevant capacity building, training and information dissemination in order to ensure replication of the outcomes in the whole country. It is also envisaged to solicit the support of women's group, research and academinc institutions to support the implementation of the training and awareness raising component of the project.
45. The GEF scenario will support the baseline project by providing a holistic environmentally sound management of PCBs in Indonesia. In the absence of GEF funding, the capacity for PCBs management as well as legal and institutional frameworks would improve slowly. Public awareness of the issues would continue to be low and the current conditions of PCBs storage and illegitimate uses by uninformed people will continue. Without assistance, replacement of existing equipment containing PCBs would continue at the current rate, but there would be modest improvements in the storage and disposal of replaced equipment, and illegitimate recycling of PCBs containing equipment would continue. The existing storage practices would remain environmentally unsafe, and there would be continued leakage and contamination, and impacts on individuals, soil and water resources, with associated risks to population and ecosystem health.

46. The GEF intervention is justified as follows: (i) The project objectives, outcomes and outputs meet the goals and objectives of Chemical FA Objective 1: Phase out POPs and reduce POPs releases and are in line with the requirements of the Stockholm and Basel Conventions; (ii) The project will apply ESM and BAT/BEP in management and disposal of PCBs, PCB containing equipment and wastes that poses major health and environmental threat and; (iii) Sustainability of the project outputs will be ensured to address the remaining PCB stockpile the country has.
47. With the assistance of the GEF , Indonesia would accelerate its reduction of PCBs and establish a proper country-wide safe and environmentally sound management and disposal of PCBs. This will avoid potential release and contamination to international waters, which is to be considered as a high risk due to the fact that Indonesia is an island state. Improper handling could result in additional POPs air emissions due to uncontrolled dumping or burning. The avoidance of all these negative effects will contribute to the global environment.
48. The project will help Indonesia in meeting its obligations under the Stockholm Convention and thus, will contribute to global efforts to control toxic chemicals in general and to eliminate PCBs in particular. It will also indirectly contribute to the objectives of two other international environmental agreements, i.e. the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal and the Rotterdam Convention on the Prior Informed Consent Procedures for Certain Hazardous Chemicals. The project will, among others, ensure safe disposal of at least 3,000 tonnes of PCBs and PCB containing equipment and wastes.

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:

Risks	Level	Mitigation Measures
<i>Outcome 1: Strengthened legislation and policy framework and enforcement of PCBs management to meet relevant obligations under the Convention</i>		
Delays in the adoption of guidance document and other regulatory tools on PCB management	L	The adoption of official guidance as an alternative a the development of a full regulation, will ensure a faster approval; The institutional capacity building component of the project will provide training to the government and other stakeholders and may reduce the risk
Lack of driving force for PCB owners and industrial stakeholders to participate and have their PCB wastes disposed	M	The development and adoption of an incentive mechanism, will catalyze commitment of PCB owners to provide reports of their PCBs and PCBs contaminated equipment and to dispose these in an environmentally safe manner.
<i>Outcome 2: Strengthened institutional capacities at central government and provincial level in selected provinces</i>		
Lack of willingness for local staff and other stakeholders to participate in the trainings.		The training will deliver competences which will represent a competitive advantage for the career of people trained, and which will be useful not only on ESM of PCBs but also on the ESM of hazardous waste and chemicals. As a minimum, the project will benefit from the competences of the PCB inventory group already established at PPG stage; A selection criteria for the participants and an endorsement from their respective offices may reduce the risk.
<i>Outcome 3: Demonstration of ESM of PCBs through proper collection, packaging, registration, labelling, transportation and storage and disposal of targeted PCBs wastes</i>		

Risks	Level	Mitigation Measures
Delay in the identification or installation of a building to house the facility that will demonstrate an ESM of PCBs will affect the project implementation schedule	M	The operating entity will be selected during the initial phase of the project and their commitment secured; To assist the operating entity prepare their own Financial Study, a Business Plans and several Feasibility Studies will be prepared.
Delay in the issuance of Environment and other Local Permits will affect the project implementation schedule	M	The selection of a Project Site or operating entity that has previous experience in obtaining environment and other local permits for operation would reduce or eliminate this risk
Inability of the OE to operate the selected technology to dispose PCBs and PCB containing equipment in an environmentally-sound manner.	L	Trained Manager and operators of the Disposal Facility and an effective Monitoring and Evaluation component of the Project in place would reduce or eliminate this risk
Exposure of the operators and workers of the facilities and the community to the hazards of PCBs	L	Extensive awareness raising campaigns and proper training will be undertaken to ensure that the community/ies, operators and workers of the facility understand the risks and impacts of PCBs to human health and environment.
Outcome 4: Increased public awareness on issues concerning PCBs		
Delay in the selection of the stakeholder to implement the public awareness component may affect the project implementation	L	The establishment of selection criteria for the selection of stakeholders will reduce the risks
Outcome 5: Effective project monitoring and evaluation implemented		
Delays in project implementation and low quality performance	L	Carefully selected success indicators and the adaptive monitoring practice will enable timely implementation and high quality results

A.7. COORDINATION WITH OTHER RELEVANT GEF FINANCED INITIATIVES

49. The Republic of Indonesia, as member of Regional ESEA BAT/BEP Forum, is currently undertaking the following regional ESEA BAT/BEP projects on POPs: (i) Regional plan for the introduction of BAT/BEP strategies to industrial clusters of annex C of Article 5 sectors in ESEA Region and; (ii) Demonstration of BAT/BEP in Fossil fuel-fired utilities and industrial boilers in response to the Stockholm Convention on POPs.
50. Chemicals safety and chemicals management is of high concern, taking into account, for example, the active participation of Indonesia in programmes of bilateral and multilateral scale. Indonesia was also participating in the work of the Preparatory Committee for the Development of a Strategic Approach to International Chemicals Management (SAICM). The industry program of Responsible Care is under successful implementation in Indonesia. Among others, the following projects, which have already been finalized or are under execution, listed below are also interrelated.
- *Chemical Management and Control Strategies: Experiences from the GTZ Pilot Project on Chemical Safety in Indonesian Small and Medium-sized Enterprises (2003);*
 - *Development of the National System for the implementation of Global Harmonized System (GHS) for classification of chemicals (UNITAR, 2007).*
51. The hazardous wastes area is also a priority problem where Indonesia cooperates internationally, among others, also in the frame of the Basel Convention. The Ninth Meeting of the Conference of the Parties (COP) to the Basel Convention was held in Bali, the Republic of Indonesia in June 2008.
52. The project will also support the implementation of projects in other GEF Focal Areas, such as the energy efficiency, protection of coastal zones and international waters. Table below shows list of GEF-related projects in Indonesia:

LIST OF SOME GEF RELATED PROJECTS:

National	Industrial Energy Efficiency through System Optimization and Energy Management Standards	National	Energy	UNIDO
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Regional	Prevention and Management of Marine Pollution in the East Asian Seas	Asia	International Waters	UNDP
Regional	Implementation of Sustainable Development Strategy for the Seas of East Asia (SDS-SEA)	Asia	International Waters	UNDP
Regional	World Bank/GEF Partnership Investment Fund for Pollution Reduction in the Large Marine Ecosystems of East Asia	Asia	International Waters	IBRD
Regional	Emergency Response Measure to Combat Fires in Indonesia and to Prevent Regional Haze in South East Asia	Asia	Multi-focal Areas	UNEP
Global	Alternatives to Slash and Burn	CEX	Climate Change	UNDP

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

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

53. Various stakeholders from government ministries and institutions, private sectors and public electrical utilities have been identified and approached during the PPG phase and will be fully engaged during the project implementation. The Indonesian government and its respective relevant ministries have committed their full support of the project and will be allocating resources to carry out their respective responsibilities on POPs issues as reflected in the country NIP. The MoE is planning to expand the current policy and legal framework addressing PCB Management in the country. The Ministry of Environment (MoE) is the lead agency for the project and has taken its role to coordinate and ensure the timely implementation of the project. The Ministry of Energy and Mineral Resources (MEMR) and the Ministry of Industry (MOI) will assist in the inventory activity particularly dealing with the industries under their responsibility and will participate in institutional capacity building, strengthening regulatory and policy framework and introduction of ESM for PCB such as (for MEMR) mining, electricity and oil companies that may have used PCB oil in the transformers. During the PCB disposal activity, MEMR and MOI will assist the project in obtaining commitments from state-owned and private PCB owners to dispose of their stockpile in an environmentally sound manner. The same support will be provided in encouraging the selected PCB owners to actively participate in the pilot project. The Ministry of Health (MOH) and the Ministry of Women Empowerment and Child Protection will be engaged in relevant activities including inclusion of POPs-related activities in their overall programs.
54. During the PPG, the MoE has earned the commitment of various private entities (PCB owners), including PT Freeport Indonesia, PT Krakatau Daya Listrik, PT South Pacific Viscouse and others, to dipose of their stockpile in an environmentally sound manner and has correspondingly generated co-financing contributions from this sector to deliver the needs and objectives of the project.
55. The project will seek participation of academia on the technical requirements of the project, capacity building and inclusion of POPs issues in the curricula. Active contribution of transformer service providers, relevant industry associations, NGOs, women's organization and the media will be further encouraged towards as successful implementation of the project, particularly in public awareness raising activity.

Implementation arrangement

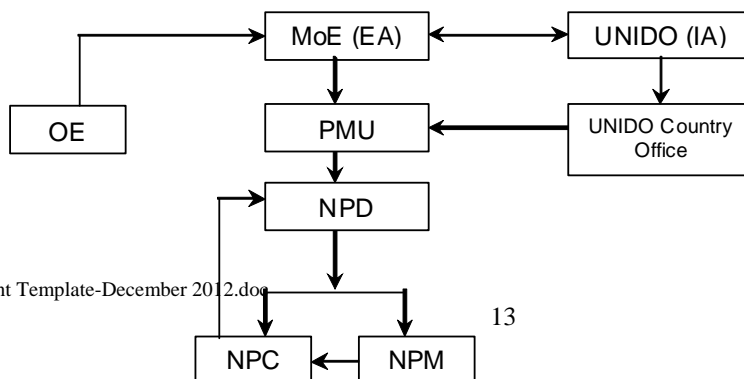


Figure 1. Organogram for Project Implementation

56. The structure of project implementation is provided on Figure 1. UNIDO will be the GEF Implementing Agency (IA) for the project. A project officer will be appointed in UNIDO to oversee the implementation of the project, assisted by a support staff and supervised by a senior professional staff engaged in the management and coordination of UNIDO's Stockholm Convention Programme. The UNIDO Country Office in Indonesia will also play a significant role in the implementation and monitoring of the project. A National Project Officer will be appointed to undertake full coordination with the Project management Unit (PMU) in the Ministry. UNIDO country-level monitoring will be provided as part of the in-kind contribution of the organization to the project.
57. The Ministry of Environment (MoE) of the Republic of Indonesia shall act as the executing partner for the project. MoE is the nodal agency for planning, promoting and coordinating the environmental programmes including chemicals management in Indonesia. The MoE is mandated to implement activities related to the obligations of the country to the Stockholm Convention.
58. One of the important issue that needs to be addressed during the earlier stage of project implementation is the selection of the operating entity (OE) of the technology that will be delivered by the project and will execute the main component of the project which is the ESM and disposal of PCBs. The criteria for selection have been designed and agreed while the mechanism will be agreed with the relevant stakeholders to ensure that the chosen entity will meet the requirement of the project. Para 39 describes some of the criteria set for the selection of the operating entity. Some possible operating entities have also been identified during the PPG. However, the GoI defers the final selection as it might need to undergo a bidding process to comply with the Anti-Corruption Law of Indonesia.
59. A Project Management Unit (PMU) will be established within the Ministry. A National Project Director (NPD) from the MoE will be appointed and would chair the Project Steering Committee. A National Project Coordinator (NPC), also from the Ministry, will be assigned to oversee the activities of the project with the National Project Manager (NPM) who will be recruited to manage and implement the day-to-day tasks required by the project. International and national experts will be recruited based on project requirement.
60. Relevant stakeholders will comprise the Project Steering Committee (PSC) and Technical Working Group (TWG) of the project. MOE will lead the PSC and will be composed of a representative from MEMR/MoI, representative from the operating entity, representative of major PCB owners, representative from NGO or civil society, the NPC, the NPM and the UNIDO Project manager. The TWG will comprise of a representative from the Ministry, the operating entity, technology provided (as necessary), the NPC and the NPM. The appointees will be communicated during the Inception Phase.

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 (LDCF/SCCF):

61. Based on the results of the inventory and analysis of 221 transformers during the PPG phase, around 2,600 tons of PCB-contaminated oil and equipment were found. Around 70% of which contain PCB concentration higher than 500 ppm and only 15% is considered highly concentrated. Thus, the project will study the viability of transfer of non-combustion technology to Indonesia particularly for PCB-contaminated equipment and for low concentrated PCB oil. It is expected that releases of unintentionally-produced POPs that pose risks to human health and the environment will be reduced through this technology. The treatment of high concentration PCBs and capacitors which contain pure PCBs will be subject to the results of the feasibility study to be undertaken under the project.
62. The treatment of 3000 metric tons of PCB containing equipment within the country will prevent the exodus of valuable hard currency and maintained valuable resources in Indonesia. The project will develop and implement environmentally sound transformer maintenance and service practices as part of the ESM system, which will eliminate further cross-contamination of transformers. Consequently, the risks to human health and environment will be reduced.

63. Economic benefits through the introduction, transfer and application of new types of disposal technology in the country, generation of livelihood and gain of special expertise will result from the project, aside from the environmental and health benefits associated with disposal of PCBs. This is in line with the advocacy of the GEF in promoting the transfer of environmentally sound technologies.
64. Recognizing that the level of exposure to POPs chemicals and its related impacts on human health are determined by social and biological factors, women, children and men might be exposed to different kinds, levels and frequency of POPs , in general. Thus, gender dimensions will be an integral part of this project. This will be addressed with due regard to UNIDO gender policy, mainly by involving women and vulnerable groups at the sector level (ministries and industries), at the stakeholder level (participation in PSC and TWG) and at the information and awareness raising levels.
65. The Ministry of Women Empowerment and Child Protection of Indonesia will also be engaged in the relevant activities and in ensuring that the sector is fully-protected from the impacts of POPs. The Ministry is generally responsible in the formulation and establishment of policies on empowerment of women and protection of children.

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

66. The project aims to provide an innovative way for PCBs disposal that are proven and well known for environmentally sound recovery of valuable metals and regeneration of treated oil from transformers. Other countries with economies in transition will benefit from this experience as they could adopt similar technologies. Moreover, the transfer of environmentally sound treatment technologies for the proper disposal of PCBs will provide an inexpensive alternative to PCB owners in Indonesia to properly treat the balance of these harmful chemicals within the country in prevent them to release into the environment.
67. While the project will study all the technical options available based on the results of the extensive inventory and feasibility study, cost comparison at this stage maybe made between incineration and dechlorination options. The estimated disposal cost for PCB wastes in European incinerators for Indonesian PCB owners is about US \$ 7/kg, independently of the PCB waste stream. This cost, based on proposed services to local potential clients, include packaging, transportation and disposal costs. The cost associated with dechlorination of PCB-contaminated mineral oil (low level contamination) is approximately US \$ 2/kg, significant saving can be achieved by PCB owners that may have PCB contaminated transformers in their electrical systems. Moreover, with the relatively easy cleaning of metallic components from PCB contaminated transformers, the saving in decontamination cost can be further augmented by the recovery of valuable metals. About 30% of the total weight of the mineral oil filled transformer is copper and with an estimate price of US \$ 3.00 per pound, the recovery of copper from electrical transformer can realize a significant saving for the owner of the PCB transformer or the operator of the PCB treatment facility.

C. DESCRIBE THE BUDGETED M & E PLAN:

68. Monitoring and evaluation will facilitate tracking implementation progress toward the outcomes and objectives. Likewise, it will facilitate learning, feedback, and knowledge sharing on results and lessons among the primary stakeholders to improve knowledge and performance. This section of the project document presents a concrete and fully budgeted monitoring and evaluation plan of the project.

Monitoring and evaluation budget and timeframe

Type of M&E activity	Responsible Parties	Budget USD*	Time frame
Establish Project management structure	UNIDO PM, MoE	0**	Within the first two months of project start
Inception Workshop (IW) and inception report	UNIDO PM, PMU, MoE	0**	Within first three months of project start up
Regular monitoring and analysis of performance indicators	UNIDO PM, PMU, MoE and M&E consultants as required	40,000***	Regularly to feed into project management and Annual Project Review
Project Implementation Reviews (PIRs)	PMU to prepare prior to the annual project review UNIDO PM to validate and finalize to submit to GEF	0**	Annually

Type of M&E activity	Responsible Parties	Budget USD*	Time frame
Annual Project Review to assess project progress and performance	PMU, UNIDO PM and Project Steering Committee to review the project performance and make corrective decision	0**	Annually prior to the finalization of APR/PIR and to the definition of annual work plans
Steering Committee Meeting	PMU, UNIDO PM and Project Steering Committee	0**	Annually coincide with the Annual Project Review and whenever an urgent and important decision that need approval of the Steering Committee
Technical Committee meeting	PMU, UNIDO PM, MoE	0	Every six months
Mid-term Review	PMU, MoE, external consultants, UNIDO PM, Steering Committee	30,000	Mid of project
Terminal Project Evaluation	PMU, MoE, UNIDO PM and Project Steering Committee, independent external evaluators	50,000	Evaluation at least one month before the end of the project; report at the end of project implementation
Lessons learned	PMU, UNIDO PM	0**	By the end of project implementation; annual as part of PIR
Visits to field sites	UNIDO PM, PMU, MoE	0**	Annually
Establishment of Project Management Information System	PMU	10,000	Throughout project implementation
TOTAL indicative cost <i>* Excludes project team staff time and UNIDO staff and travel expenses ** The costs are covered under Project Management Costs ***Maybe supplemented from the Project management cost</i>		130,000	

Project Inception Phase

69. The project Inception Phase will involve the establishment of the PMU, appointment of the members of the Steering Committee, the project launching through an Inception Workshop (IW) and convening of the first Project Steering Committee (PSC) meeting. The IW is aimed at launching the project with the full project team, relevant government counterparts, co-financing partners, key stakeholders, UNIDO and representative from the UNIDO Regional Office, as appropriate. This will provide the platform to disseminate project objectives, general workplan and implementation structure to relevant stakeholders.
70. The 1st PSC is aimed at convening the project team to better understand and assimilate the goals and objectives of the project, as well as to finalize the preparation of the project's first annual work plan on the basis of the project's results framework matrix. This work will include reviewing the results framework as necessary (indicators, means of verification, assumptions), imparting additional detail as needed, and completing an Annual Work Plan (AWP) for the first year of project implementation, including measurable performance indicators.
71. Additionally, the meeting will: (i) introduce project staff to the UNIDO team, which will support the project during its implementation; (ii) delineate the roles, support services, and complementary responsibilities of UNIDO staff vis-à-vis the project team; (iii) provide a detailed overview of UNIDO reporting and Monitoring & Evaluation (M&E) requirements, with particular emphasis on the content and format of the Annual Project Implementation Reviews (PIRs), the Annual Project Report (APR), the Annual Work Plan (AWP), meetings, as well as mid-term and final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNIDO project related administrative and financial procedures, budgetary requirements and reviews and mandatory budget rephrasing. In the course of the project, the structure of the project's Management Information System will be also introduced.
72. The 1st PSC will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines and conflict resolution mechanisms. Specific targets for the first year implementation progress indicators together with their means of verification will be developed and

agreed in this workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the AWP.

73. The Inception (Phase) Report will be drafted and circulated for comments and approval by project partners within one month from the meetings.

Monitoring and Implementation

74. One month before the starting of each implementation year, the PMU will draft an Annual Work Plan, complying with requirements and formats established for the first Annual Work Plan at IW. The AWP will be submitted to UNIDO for approval. The Annual Work Plan will set the target against which project performance shall be measured at the end of each implementation year.
75. Day to day monitoring of project implementation progress will be the responsibility of the National Project Manager (NPM) based on the project's Annual Work Plan (AWP) and its indicators. The NPM will coordinate the planning and monitoring activities with the National Project Coordinator. The PMU, via the NPM, will inform UNIDO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.
76. Targets and indicators will be reviewed annually as part of the internal evaluation and planning processes undertaken by the Project Management Unit (PMU)
77. UNIDO and/or UNIDO Regional Office will conduct periodic visits based on agreed schedule to be detailed in the project's Inception Report / Annual Work Plan to assess project progress. Mission reports will be prepared by UNIDO on each corresponding visits and will be circulated to the project team.
78. Annual Monitoring will occur through PSC meetings, which will take place at least once every year. The national project manager will prepare an Annual Project Report (APR) and submit it to UNIDO at least two weeks prior to the PSC for review and comments.
79. The PSC has the authority to suspend funds disbursement if project performance benchmarks are not met.

Key impact indicators for the project

80. As the primary objective of this project is to carry out ESM disposal of PCBs and PCB-containing equipment, oil and wastes, the most direct indicators to characterize the impacts of this project should include metric tons of decontaminated dielectric oils in PCB-containing equipment and PCB-containing mineral oil and wastes.
81. Another relevant indicator is the amount (in metric tons) of PCBs contaminated equipment labeled and registered in the project database, which have been committed for disposal. This indicator reflects the fact that specific PCB equipment have been identified, kept under control and are currently pending disposal. Securing stockpiles for future disposal is one of the most important tasks in any POPs management project; the amount of PCBs equipment secured for future disposal has also to be considered an indicator of the soundness and practicability of the PCB management plan.
82. The other two relevant indicators (regulatory instrument adopted, and PCB disposal facility established and permitted) provide insights not only on project impact, but also on the future sustainability of the project outcomes.

Key project Impact Indicators

Key Impact Indicator	Baseline	Target (at Year 5)	Means of Verification	Frequency of verification	Location
Regulatory instrument on PCB adopted	General hazwaste regulation including PCBs	One set particularly on PCB management	Meeting reports, copy of the officially adopted regulatory instrument	Annually after the second year of implementation	-
Disposal facility established, tested and permitted, for an overall disposal capacity suitable to cover or exceed project needs compliant with the requirements of SC	0	1	Site visits, testing reports, official permitting documents	Within the first 36 months of project implementation	Disposal facility site
Amount of PCBs equipment, which have been already identified and registered in the project database, committed for disposal (equipment weight)	0	At least 3000 metric tons	Labeling and registration data and inspection	Annually	PCB owners sites, temporary storage at the disposal facility

Amount of PCBs equipment treated (weight of PCB containing equipment)	0	At least 3000 metric tons	Hazardous waste manifest; project PCB registration sheets.	Annually	PCB owners sites, transportation company, temporary storage at the disposal facility
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Terminal Project Workshop

83. The terminal project meeting will be held in the last month of project operation. A draft final report will serve as the basis for discussions in the final workshop. This will serve as a venue to consider the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results and acts as a means, which lessons learned can be captured for use in other projects under implementation or formulation.

Project Monitoring Reporting

84. The national project team in conjunction with the UNIDO will be responsible for the preparation and submission of the following reports that form part of the monitoring process.

(a) Inception Report

85. A Project Inception Report (IR) will be prepared immediately following the Inception phase. It will include a detailed First Year Work Plan divided into quarterly timeframes, which detail the activities and progress indicators that will guide the implementation during the first year phase of the project. The Work Plan will include the tentative 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, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 month timeframe.

(b). Project Implementation Report

86. The Project Implementation Report (PIR) is an annual monitoring process mandated by the GEF. It is an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. Once the project will be under implementation for a year, the project team shall complete the PIR. The PIR can be prepared any time during the year (July-June) and ideally, immediately prior to the PSC.

87. The PIR includes the following: (a) Analysis of the achievement of project objectives; (b) Analysis of project performance over the reporting period, including outputs produced and information on the status of the outcome; (c) Management of Risks (d) Co-financing accounting (resources provided both as in kind or cash contribution). Expenditure reports, lessons learned and recommendations to address key problems, if applicable, maybe reported.

The PIR shall also constitute the annual project report of the project. The annual progress report is a UNIDO requirement and part of the UNIDO central oversight, monitoring and project management.

Independent Evaluations

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

(a) Mid-term Evaluation. An independent Mid-Term Evaluation will be undertaken at the end of the third year of project implementation. The Mid-Term Evaluation, performed by an independent consultant, will measure progress made towards the achievement of outcomes and will identify corrections if needed. The evaluation will focus on the project performance in terms of relevance, effectiveness, efficiency and timeliness of project implementation; 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's 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 in accordance with the generic TORs developed by the GEF Evaluation Office.

(b) Final Evaluation. An independent Final Evaluation will take place after the operational completion of the project, and will focus on the same issues as the mid-term evaluation, with a greater focus on project 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 future projects, based on lesson learned and success stories. The Terms of Reference for this evaluation will be prepared by the UNIDO in accordance with the generic TORs developed by the GEF Evaluation Office.

89. A Project Management Information System will be established to support the Project Manager and the project management team to ensure that all the project activities be completed on time, in quality and within budget. The MIS will include a database containing (in electronic format or scanned PDF) all the project technical and administrative documentation. The MIS will keep baseline records of Annual Work Plans and contracts with consultants and subcontracts with performance indicators, result reports, responsibilities and budgets, allowing the easy comparison of them with the progress of the activities.

General Consideration

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

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


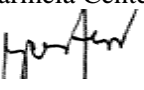
- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this form. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mr. Dana A. KARTAKUSUMA	Special Advisor to the Minister on Economic and Sustainable Development Affairs	MINISTRY OF ENVIRONMENT	OCT. 6, 2010

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	Signature	Date	Project Contact	Telephone	Email
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Coordinator, Agency Name		<i>(Month, day, year)</i>	Person		Address
Mr. Philippe Scholtes Officer-in-Charge Programme Development and Technical Cooperation Division UNIDO GEF Focal Point		07/25/2013	Carmela Centeno 	+43(1) 260263385	c.centeno@ unido.org
		/			

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).

Hierarchy of Objectives	Indicators	Baseline	Target	Sources of Verification	Assumptions
<p>Project Objectives: (a) Introduce and implement a PCB-management system to reduce and/or eliminate releases from PCB wastes stockpiles and PCB-containing equipment (b) dispose of at least 3,000 tonnes of PCB wastes and PC-containing equipment in ESM</p>	Tons of PCBs disposed	PCB disposal not yet undertaken	Disposal of NIP PCB inventory of around 20,000 tons	PCB disposal reports	The Government of Indonesia will commit funds to establish PCB management system in the country and PCB-owners to dispose of the PCB stockpiles.
<p>Outcome 1. Legislation and policies on PCB management, including incentive mechanism, adopted and endorsed to meet relevant obligations under the Convention</p>	A set of regulatory instruments compliant with Stockholm requirements on PCBs (Annex A, part II) adopted. Incentive scheme for the project implemented.	In Indonesia, regulation on PCBs is limited to generic provisions in the HazWaste legislation. No incentive mechanism for promoting disposal of PCBs has been ever implemented.	A new set of guidance/guidelines particularly focusing on PCBs drafted, implemented and endorsed.	Copies of officially adopted regulations	The government of Indonesia is committed to timely adopt one or more regulatory tools which will obligate and promote stakeholders at managing PCB in an environmental sound manner.
<p>Output 1.1: Policy and regulatory framework reviewed and formulated</p>	Set of regulatory instruments compliant with Stockholm requirements on PCBs (Annex A, part II) adopted.	Currently, to implement the Convention, Indonesia has banned 10 POP chemicals through GR No. 74/2001. Except for the banning of PCB use, this legislation does however not contain specific provision on PCBs management and disposal.	Regulatory instruments, like a framework regulation on PCBs or an official guidance on PCB management is drafted, submitted to the relevant legislative bodies, and officially adopted.	Meeting reports, copy of the officially adopted regulatory instrument.	Agreement among stakeholders on the content of the regulatory tool will be reached rapidly and effectively.
<p>Output 1.2: Economic</p>	An incentive mechanism	No incentive mechanism	An incentive mechanism,	Market analysis based on	An incentive mechanism

and market-based incentives proposed for disposal of PCB-containing equipment and wastes	for supporting the timely ESM disposal of PCBs equipment and waste agreed and implemented.	for ESM management of PCBs in place.	based on a sound market analysis and subjected to a financial and sustainability assessment, is adopted in due time to support PCBs disposal within project timeframe.	cost of PCBs disposal services and PCB inventory outcome; meeting reports; officially adopted incentive scheme.	is the proper instrument for catalyzing commitment of PCB owners in reporting their PCBs contaminated equipment and disposing these in an environmentally safe manner.
Outcome 2: Strengthened institutional capacities on PCB management at central government level and at provincial level in selected provinces	Number of staff from governmental institutions are provided with the necessary skills to carry out their technical and administrative tasks related to the implementation of Stockholm Convention requirements on PCBs.	Currently, capacity of governmental institution on properly implementing the provisions of the Stockholm Convention on PCBs is scarce and mostly centralized.	At least 20 core staff (focal points) covering local governments at provincial level in Java Island intensively trained to implement PCB management awareness and training to other relevant stakeholders. At least one government laboratory accredited to perform PCB sampling and analysis		The project fully supported by the MOE, MOI, MEMR and MOMT
Output 2.1: Capacity on PCB management built/strengthened among government staff in the central and provincial level	Capacity building needs for governmental institutions are assessed. Number of training addressing identified needs is designed and carried out successfully.	PCB inventory team was established during the PPG, this team can serve as initial PCB working group to be trained on ESM.	A PCB working group of at least 10 selected people will be trained on all the technical, regulatory, financial, health and safety aspect of Environmentally Safe Management of PCBs enabling them to conduct training to other relevant stakeholders.	Report on training effectiveness properly measured (pre and post training tests, feedback from the trainees) and documented. Training material translated in Indonesian and made available for future training courses.	A sufficient number of people from governmental institutions is willing to attend the training. A skilled working group represents one of the key resource for ensuring the sustainability of ESM of PCBs. Availability of skilled persons trained in the early stage of the project is crucial for the

					successful implementation of the project.
Output 2.2: Capacity built/strengthened to conduct extended inventory on PCBs in selected provinces covering at least Java Island	<p>Number of staff trained to conduct proper inventory</p> <p>Availability of a PCB inventory covering at least all the provinces of Java Island, based on site survey, questionnaires and sampling.</p> <p>Availability of a PCB management plan drafted and agreed by relevant stakeholders.</p>	<p>Limited number of staff are able to conduct inventory of PCBs.</p> <p>Data on PCBs contaminated equipment are not sufficient to establish a sound PCB management plan, which indeed has never been implemented.</p> <p>Efforts carried out in the course of the PPG in updating the inventory of PCB in Indonesia suggest that up to 40% of the transformers tested may have a PCB content higher than 50 ppm.</p>	<p>PCB inventory team established</p> <p>At least one laboratory accredited to analyze PCBs</p> <p>A PCB inventory (including labelling and registration of identified PCB equipment in the project PCB database) carried out, covering at least all the provinces of Java Island.</p> <p>A PCB management plan for the project, based on inventory outcome and priority considerations, which can be used as a model for the country PCB management plan, drafted and agreed among relevant stakeholders.</p>	<p>Training report</p> <p>PCB inventory report.</p> <p>Site visits reports.</p> <p>Sampling and analysis reports.</p> <p>Database of PCBs contaminated equipment containing serial numbers of identified PCB equipment.</p> <p>PCB management plan</p>	<p>The PCBs working group, together with the PCB inventory team, will carry out the updating of the PCB inventory in a timely and effective manner.</p> <p>An inventory database where all identified PCBs equipment are registered is a crucial tool for securing PCBs equipment to be disposed within project timeframe.</p> <p>A PCBs management plan, based on an extensive and accurate data set and on priority considerations, and agreed among stakeholders, is the proper instrument for planning the ESM of PCBs within project timeframe.</p> <p>The experience gathered in drafting and implementing the PCBs management plan will ensure replicability and sustainability after project end.</p>
Outcome 3: ESM of PCBs through proper collection, packaging,	Tons of PCBs and PCB-containing equipment identified and registered		At least 3000 metric tons of PCB equipment identified, labeled,		

registration, labelling, transportation, storage and disposal of targeted PCBs wastes applied.	in the project database, committed for disposal (equipment weight) Amount of PCBs equipment treated (weight of PCB containing equipment)		registered in the project database, committed and disposed in compliance with SC requirement and guidelines.		
Output 3.1: Operating entity selected	TOR for the selection of an operating entity fulfilling eligible criteria.	Currently PCB is disposed by PCB owners without significant coordination. No operating entity in charge of ESM of PCBs existing.	Institutional capacity of candidate entities for PCB handling and disposal assessed. One operating entity for PCB handling and disposal selected. Technical and analytical capacity of the operating entity upgraded as needed.	Eligibility criteria for the operating entity. Operating entity selection report. Training reports (pre and post training evaluation tests, list of attendees, training material)	In Indonesia there is at least an operating entity that after proper capacity building can fulfil eligibility criteria. The early identification and strengthening of the operating entity is crucial for the successful implementation of the project and will ensure sustainability of project activities after project end.
Output 3.2: Pilot ESM system for PCBs established on identified PCB owners sites	The overall procedure for PCB equipment identification, labeling, tracking and transportation established with proper technical code of practices and implemented.	Although in Indonesia rules on the handling and disposal of hazardous waste exist, these do not cover PCBs containing equipment.	Code of practices for packaging, transportation, labeling, tracking, temporary storage and disposal of PCBs drafted, translated in English and Indonesian, and approved. Operating entity properly equipped and licensed for carrying out packaging, transportation, labeling, tracking, temporary storage and disposal.	Code of practices documents. Operating entity license. List of equipment owned by the operating entity (laboratories, trucks, storage and disposal facilities) Site visit to the operating entity facilities.	The operating entity is willing to operate in accordance with the codes of practice which will be developed under the project. The operating entity will maintain its commitment and its capability for the whole duration of the project. The operating entity will ensure that new operators that would possibly recruited at a second stage will be properly

					trained.
Output 3.3: PCB treatment facility established or functional	Suitable disposal technology for the ESM disposal of PCBs equipment/waste tested and permitted, for an overall disposal capacity suitable to satisfy or exceed project needs. Amount of PCBs equipment and waste successfully disposed.	There is not enough disposal capacity in the country to satisfy the need of PCBs disposal in compliance with the SC BAT/BEP criteria and deadline. There is currently not enough disposal capacity for disposing the 3000 tons of PCB equipment committed for disposal under the project.	One or more suitable disposal facilities, compliant with the SC BAT/BEP criteria, for a capacity suitable to fulfil or exceed project needs, established, tested and permitted. 3000 tons of PCBs equipment or waste disposed by means of such facility.	Technical specifications of the PCBs disposal facility. Bidding documents and reports. Proof of Performance test report of the PCB disposal facility. Hazardous waste manifests of the disposed PCBs waste. Project PCB tracking sheets (certificates of delivery to the facility and successful disposal)	A suitable and cost effective technology will be identified. A disposal facility will be procured, successfully tested and permitted within project timeframe (within 36 months from project implementation) The disposal facility will work reliably maintaining the required disposal capacity to treat 3000 tons of PCBs within project timeframe. PCB owners will maintain their commitment to dispose their PCBs under the project. The PCBs equipment committed for disposal reaches or exceeds the amount of 3000 tons.
Outcome 4: Increased public awareness on issues concerning PCBs	Number of relevant public awareness workshops held. Number of stakeholders aware of the risks associated with PCBs and of the benefits of managing them in an Environmental Sound Manner.	The awareness of the PCBs issue is very limited even among the main PCB owners.	At least 3 Awareness Workshops held on PCB issues. At least 50 institutions, PCB owners, public institutions scientific institutions and NGOs with increased awareness on PCB management.	Awareness raising workshops reports for Central and Local Government level	

<p>Output 4.1: Stakeholder engagement including NGOs and civil society established</p>	<p>Number of stakeholders targeted and participating in raising awareness initiatives.</p>	<p>Identification of target stakeholders for raising awareness on PCBs issues never carried out.</p>	<p>At least 2 universities, one NGO, 2 public institutions, 2 waste management companies identified and participating in raising awareness initiatives.</p>	<p>Awareness raising plan and strategy report. List of targeted stakeholders contacted. Reports / recording of raising awareness initiatives. Questionnaire surveys carried out before and after raising awareness initiatives.</p>	<p>Identification of the proper target, which is not necessarily the public at large, is crucial for an effective awareness raising on PCB. Target stakeholders identified are willing to participate in raising awareness initiatives. The level of awareness is measurable by means of properly conducted questionnaire surveys.</p>
<p>Output 4.2: Development and implementation of training and awareness programs</p>	<p>Awareness raising material. Number of awareness raising events held. Outcome of questionnaire surveys.</p>	<p>No awareness raising material on PCBs is available in the country, either for the general public or for specific stakeholders.</p>	<p>Awareness raising material specifically developed for: Universities Operators of PCBs owners (i.e. utilities, large factories), public institutions and NGOs</p>	<p>Dissemination materials specifically prepared for each target group identified.</p>	<p>A suitable expert on communication can be identified who can properly interact with technical experts to develop effective and appealing awareness raising materials.</p>

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).

Technical comments of Canada (dated February 2012) for Project ID 4446 :Introduction of Environmentally Sound Management and Disposal System on PCB wastes and PCB-contaminated equipment) in Indonesia.

Based on the preliminary PCBs inventory, it is estimated that there is about 23,000 tons of PCB contaminated oil to manage. The PIF should clearly stipulate how the remaining 20,000 tons that will not be disposed will be handled or stored.

UNIDO Response:

Review of the estimation of the total weight of PCB contaminated oil in the Second Phase Report on “Enabling Activities to Facilitate Early Action on the Implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs) in Indonesia”, Part I revealed that the calculation contained a mistake that resulted in an overestimate.

In page 16 (English version), the number of transformers dated before 2004 was estimated to be 1838 pieces. This is 44.1% of the total 4171 units owned by the respondents to the questionnaire. On page 14 of the document the results given from the quantitative PCB tests on 35 transformers show that 8 transformers (2 units containing PCBs between 70 and 400 ppm and 6 containing PCBs in the range of 0.13 to 0.32%). The 8 contaminated transformers represent 22.8% of the tested population. Table 3.3 gives an average total weight of the transformers to be 7385 kg. With an estimated weight equivalent to 1/3 of the total weight of the transformer being oil, the average amount of oil in each transformer is estimated to be 2462 kg/unit.

Based on the 22.8% of the transformers found to contain PCBs above 50 ppm, the total number of transformers in Indonesia to be suspected of containing PCBs above the 50 ppm is $1838 \times (22.8/100)$ or 419 pieces. With an average amount of oil of 2462 kg per unit, then the amount of PCB contaminated oil in the 419 units multiply by 2462 or 1,031,578 kg. As it was assumed that the 1838 transformers represents only 20.2% of all transformers in Indonesia, then the total amount of PCB contaminated oil in the country becomes $1,031,578 \text{ kg} \times (100/20.2)$ or 5,106,731 kg. Thus, the total amount of PCB contaminated oil from transformers in Indonesia is 5,106,731 kg and the total weight of PCB contaminated transformers is $(1/3) \times 5,106,731$ or 1,702,244 kg. Based on this corrected assessment of the total amount of PCB contaminated transformers of about 1,702 metric tons, the 3000 metric tons of PCB containing material to be treated by the project represents about 20% of the national inventory.

By acquiring a dechlorination system that can treat about 1500 kg of oil per batch, the unit could treat 4500kg of oil per 8-hr shift. Thus, assuming that you can operate the unit for 250 days, the total amount of oil that can be treated by this system is 1,125,000 per year. By increasing the number of shifts to two or three per day, the amount of oil that can be treated per year is 2,250,000 or 3,375,000 kg per year. Thus, the acquisition of such a system to treat the PCB contaminated oil could provide the solution to treat the total amount of contaminated oil in a priode of time that would allow Indonesia to meet its obligation under the Stockholm Convention

Scientific and Technical Advisory Panel

Date of screening: January 23, 2012

Screeener: Christine Wellington-Moore

Pnel member validation by: Hindrik Bouwman

Consultant(s):

I. STAP Advisory Response (*see table below for explanation*)

Based on this PIF screening, STAP’s advisory response to the GEF Secretariat and GEF Agency(ies): **Consent**

III. Further guidance from STAP

a) Working in the massive archipelago that is the Republic of Indonesia, with 33 provinces, in assessing the sites for gathering up of PCBs, storage sites and decontamination facility sites, there should be consideration of the risks associated with transportation between sites, as well as the site-specific contamination associated with geo-/hydrological features, atmospheric conditions and any changes associated with climate change (eg changes in storm frequency, ground water aquifer levels, rainfall and drought/flood cycles etc) that may differentially impact the security of the sites in the various areas of the country. It is assumed that EIAs will be carried out in selection of sites for storage, destruction and/or decontamination activities, and that climate-resilience will be incorporated into safety guidelines developed for transport, health and safety etc. Appropriate transportation protocols also need to be developed taking into account geographical and climate risks. STAP anticipates these

measures to be clearly reflected in the project document to ensure that GEF projects take the necessary measures to minimize all possible and foreseeable risks associated with a GEF-funded project.

UNIDO response: Noted. Guidance from the STAP has been incorporated in para 39-40 of the document.

b) In developing the project document and determining disposal options, action should be taken to incorporate the Stockholm/Basel and GEF guidance on technology selection for POPs disposal and the overall development of the ESM system for PCBs. This would ensure that a comprehensive set of parameters be used to select technologies for GEF investment (e.g. environmental performance, ability to manage residuals and transformation products of the destruction and decontamination processes, full assessment of pre-treatment steps required and attendant associated risks, and required resources and capacities to manage them). Explicitly following the aforementioned scientific guidelines would be desirable in the course of project development, implementation, and monitoring and evaluation. This would also ensure that the true costs of a technology are brought to light since pre-destruction steps (eg. characterization of the PCB congeners to be handled, prioritization, capture and transport, containment and pre-treatment) can carry their own significant resource and capacity burdens, and can often be the barrier to implementation of technologies in developing countries and CEITs. Definition of environmentally safe low POPs concentrations would also be clearer and kept consistent with best practices.

UNIDO response: Agreed. Suggested action is reflected in para 40.

c) STAP is concerned with the apparent ambiguity in the second last sentence of #19 which states: "Arguably, disposal of PCBs in incinerators may be the easier option if environmental burden is taken out of the equation (generation of more toxic gases in many cases)." STAP does not think that this line of thinking should be a part of the PIF, nor the eventual thinking for the project, since GEBs will invariably be compromised should this approach be entertained.

UNIDO response: Agreed. UNIDO has been a proponent of nonburn technologies as it is considered resource-efficient and practical option to incineration.

d) The dangers of informal, repurposed use of POPs containing containers should be included in any targeted awareness in communities. There may be a large gender component to this (eg if women do water collection and other gathering of food etc using repurposed containers).

UNIDO response: Duly noted. Suggestion will be incorporated in awareness raising activities.

e) Mention is made of enhancing analytical laboratory capacity, but how this would interact with the project is not clear. STAP suggests close interaction of this to be developed capacity within relevant aspects of the project such as to ensure characterization and quantification of PCBs, EIAs, and measuring environmental levels of PCBs before, during, and after operation. Consideration should be given to monitor operator exposures. These aspects could also be incorporated in risk mitigation.

UNIDO response. Noted. Strengthening laboratory capacity on PCB analysis in several matrices will be undertaken. PUSARPEDAL, the government-owned laboratory was identified as the main recipient of the training. Monitoring of operator and worker exposures is considered as part of the risk mitigation measures.

f) STAP also suggests that this project should learn from numerous similar projects in other countries, and consider the lessons learned.

UNIDO response: Agreed.

g) STAP is also concerned about the remainder of the PCBs that will be collected and stored at "interim storage sites" (potentially 20,000 tons). Provision should be made to ensure sustainable ESM of the PCBs after completion of the project . This should include sound management of contaminated sites as well as care that in creating interim storage/collection sites, you don't inadvertently create more contaminated sites in the country.

UNIDO response: Country-wide PCB disposal plan will be developed. Please refer to para 37-43.

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS⁵

A. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY:

The PPG activities undertaken have justifiably resulted to the achievement of the objectives set in the project preparation phase. Concrete results were achieved through the workshops organized involving various stakeholders and through continuous consultations with the government counterparts and relevant stakeholders.

A PCB stakeholders' meeting was conducted on 27 March 2012 with 85 participants consisting of government institutions, private sectors and NGOs. This event generated strong interests from the various stakeholders and has provided a venue to inform them of the project. Several coordination meetings was conducted with the Ministry of Environment (MoE) to decide on the workplan and implementation requirements of the project.

One of the significant achievements of the PPG phase is the conduct of inventory with the various premises and subsidiaries of PT.PLN (National Electric state-owned company). In NIP, it was mentioned that PT.PLN declared that PCB is not utilized in their facilities anymore. With the assistance and intervention of Ministry of Energy and Mineral Resources (MEMR), a total of 100 transformers were identified and analyzed for the company alone. Prior to the actual inventory, training on the inventory scenario and the use of PCBs screening equipment was conducted for the Inventory Team and Ministry of Environment personnel. A total of 221 transformers were labelled and analyzed. This provided a good assessment of the PCB situation in the country.

The PPG phase also succeeded in the generation of strong commitment from various stakeholders. Government ministries like MOE, MEMR, Ministry of Industry (MoI) and Ministry of Manpower and Transmigration have allocated resources to deal with POPs issues in the country. Other stakeholders including PT.PLN, private industries and other government institutions also contributed to the co-financing requirements of the project.

One important issue that is yet to be concretized is the selection of the operating entity of the project. Government procedures and decisions abide by the rules of the Komisi Pemberantasan Korupsi (Anti-corruption Commission). Thus, the operating entity is to be selected through a set of criteria and proedures observing the rules of the Commission.

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

PPG Grant Approved at PIF:			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
1. Generate public and private sectors involvement in the project	30,000	30,000	0
2. Determination of potential PCB wastes eliminated attributable to the proposed GEF project	30,000	30,000	15,000
3. Preparation of incremental cost matrix	15,000	15,000	0
4. Development of investment plan and project document preparation	75,000	60,000	0
Total	150,000	135,000	15,000

⁵ 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: TIMELINE OF ACTIVITIES

Timeline for Component 1		Year 1				Year 2				Year 3				Year 4				Year 5			
		1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q
Outcome 1	Legislation and policies on PCB management, including incentive mechanism, adopted and endorsed to meet relevant obligations under the Stockholm Convention	█																			
Output 1.1:	Policy and regulatory framework reviewed and formulated	█																			
Activity 1.1.1:	Review and assessment of the existing legal and regulatory framework on PCBs and drafting of a gap analysis report	█																			
Activity 1.1.2:	Development and adoption of a PCB official guidance.			█																	
Activity 1.1.3:	Communication and dissemination on the official guidance.			█	█																
Output 1.2:	Economic and market-based incentives proposed for disposal of PCB-containing equipment and wastes	█																			
Activity 1.2.1:	Market analysis based on the cost of testing and disposal options, and PCB inventory	█																			
Activity 1.2.2:	Proposal of a testing and disposal incentive scheme, including consultation with stakeholders		█	█																	
Activity 1.2.3:	Financial and sustainability assessment of the incentive scheme			█																	
Activity 1.2.4:	Adoption of the final incentive program			█	█																
Timeline for Component 2		Year 1				Year 2				Year 3				Year 4				Year 5			
		1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q
Outcome 2	Strengthened institutional capacities at central government level and at provincial level in selected provinces.	█																			
Output 2.1:	Capacity on PCB management built/strengthened among government staff in the central and provincial level.	█																			
Activity 2.1.1:	Establish a technical working group for PCB management.	█																			
Activity 2.1.2:	Assessment of capacity building needs		█	█																	
Activity 2.1.3:	Conduct training and workshops at central and provincial level on PCB management			█	█																
Activity 2.1.4:	Laboratory capacity for PCB measurement enhanced.		█	█	█																
Output 2.2:	Capacity built/strengthened to conduct extended inventory on PCBs undertaken in selected provinces covering at least Java Island	█																			
Activity 2.2.1:	Establish and train the inventory team		█	█																	
Activity 2.2.2:	Update the inventory of equipment possibly contaminated by PCBs in the selected provinces			█	█																
Activity 2.2.3:	Carrying out sampling of equipment possibly contaminated by PCBs in selected provinces.			█	█																
Activity 2.2.4:	Consolidate the inventory and draft a PCB management plan based on data and priorities					█															

Timeline for Component 3		Year 1				Year 2				Year 3				Year 4				Year 5			
		1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q
Outcome 3	ESM of PCBs through proper collection, packaging, registration, labelling, transportation, storage and disposal of targeted PCB wastes applied.	[Blue bar spanning from Year 1 Q1 to Year 5 Q2]																			
Output 3.1:	Operating entity selected	[Blue bar spanning from Year 1 Q1 to Year 1 Q2]																			
Activity 3.1.1:	Assessment of the institutional capacity of candidate entities for PCB handling and disposal.	[Blue bar spanning from Year 1 Q1 to Year 1 Q2]																			
Activity 3.1.2:	Selection of the operating entity for PCB handling and disposal.	[Blue bar spanning from Year 1 Q1 to Year 1 Q2]																			
Activity 3.1.3:	Drafting of a business plan for the operating entity	[Blue bar spanning from Year 1 Q1 to Year 1 Q2]																			
Activity 3.1.4:	Upgrade technical and analytical capacity of the operating entity.	[Blue bar spanning from Year 1 Q1 to Year 1 Q2]																			
Output 3.2:	Pilot ESM system for PCBs established on the identified PCB owners sites	[Blue bar spanning from Year 1 Q3 to Year 3 Q4]																			
Activity 3.2.1:	Drafting of technical code of practices for the ESM system.	[Blue bar spanning from Year 1 Q3 to Year 1 Q4]																			
Activity 3.2.2:	Implementation of the ESM system (labelling, registration, transportation)	[Blue bar spanning from Year 1 Q3 to Year 3 Q4]																			
Output 3.3:	PCB treatment facility established or functional.	[Blue bar spanning from Year 2 Q1 to Year 5 Q2]																			
Activity 3.3.1:	Detailed feasibility study on technical options commissioned taking into consideration the PCB management plan	[Blue bar spanning from Year 2 Q1 to Year 2 Q2]																			
Activity 3.3.2:	Technical options selected procured and permitted for the environmentally sound and safe disposal of PCBs and PCB-containing equipment and waste	[Blue bar spanning from Year 2 Q1 to Year 3 Q4]																			
Activity 3.3.3:	Environmental monitoring	[Blue bar spanning from Year 3 Q1 to Year 4 Q4]																			
Activity 3.3.4:	Treatment of 3000 tons of PCB wastes and PCB-containing equipment	[Blue bar spanning from Year 3 Q1 to Year 5 Q2]																			

Timeline for Component 4		Year 1				Year 2				Year 3				Year 4				Year 5			
		1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q
Outcome 4	Increased public awareness on issues concerning PCBs	[Blue bar]																			
Output 4.1:	Stakeholder engagement including NGOs and civil society established	[Blue bar]																			
Activity 4.1.1:	Drafting of an awareness raising strategy, addressing identification of target (NGOs, industry, scientific institutions, environmental authorities) and preferred target-based communication actions.	[Blue bar]																			
Activity 4.1.2:	Development of target-based awareness raising materials for each target group identified	[Blue bar]																			
Output 4.2:	Development and implementation of training and awareness programs	[Blue bar]																			
Activity 4.2.1:	Holding of workshops on PCBs for specific target groups including NGOs	[Blue bar]																			
Activity 4.2.2:	Training for authorities, universities operators, NGOs	[Blue bar]																			
Activity 4.2.3:	Printing, dissemination, broadcasting	[Blue bar]																			
Timeline for Component 5		Year 1				Year 2				Year 3				Year 4				Year 5			
		1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q
Outcome 5	Effective monitoring and evaluation implemented	[Blue bar]																			
Output 5.1:	M&E mechanism designed and implemented	[Blue bar]																			
Activity 5.1.1:	Establish the Project Steering Committee and hold inception meeting	[Blue bar]																			
Activity 5.1.2:	Recruit technical experts based on project requirements	[Blue bar]																			
Activity 5.1.3:	Measure impact indicators on an annual basis	[Blue bar]																			
Activity 5.1.3:	Measure impact indicators on an annual basis	[Blue bar]																			
Activity 5.1.4:	Prepare Annual Project Reports, Annual Work Plan and Project Implementation Reviews	[Blue bar]																			
Activity 5.1.5:	Hold annual Project Steering Committee meetings	[Blue bar]																			
Activity 5.1.6:	Carry out mid-term external evaluation	[Blue bar]																			
Activity 5.1.7:	Carry out final external evaluation	[Blue bar]																			
Activity 5.1.8:	Complete the Terminal Report	[Blue bar]																			
Activity 5.1.9:	Establish a project management information system (MIS).	[Blue bar]																			

ANNEX F: BUDGET GEF GRANT

	GEF Outputs	Budget lines	Description	Year 1		Year 2		Year 3		Year 4		Year 5		Total	
				US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m
Output 1.1:	Policy and regulatory framework strengthened	11-00	Consultants	\$8,000	0.7	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$8,000.00	0.74
		17-00	Nat. Experts	\$2,000	0.6	\$8,000	2.3	\$0	0.0	\$0	0.0	\$0	0.0	\$10,000.00	2.88
		51-00	Sundries	\$0		\$0		\$0		\$0		\$0		\$0.00	
		15-00	Project staff travel	\$8,000		\$0		\$0		\$0		\$0		\$8,000.00	
		45-00	Equipment	\$0		\$0		\$0		\$0		\$0		\$0.00	
		30-00	Workshops	\$26,000		\$8,000		\$0		\$0		\$0		\$34,000.00	
		21-00	Subcontracts	\$0		\$0		\$0		\$0		\$0		\$0.00	
		Sub-total				\$44,000	1.32	\$16,000	2.31	\$0	0.00	\$0	0.00	\$0	0.00
Output 1.2:	Economic and market-based incentives proposed for disposal of PCB-containing equipment and wastes	11-00	Consultants	\$26,000	2.4	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$26,000.00	2.40
		17-00	Nat. Experts	\$23,714	6.8	\$2,286	0.7	\$0	0.0	\$0	0.0	\$0	0.0	\$26,000.00	7.50
		51-00	Sundries	\$429		\$571		\$0		\$0		\$0		\$1,000.00	
		15-00	Project staff travel	\$12,000		\$0		\$0		\$0		\$0		\$12,000.00	
		45-00	Equipment	\$0		\$0		\$0		\$0		\$0		\$0.00	
		30-00	Workshops	\$7,143		\$2,857		\$0		\$0		\$0		\$10,000.00	
		21-00	Subcontracts	\$15,000		\$0		\$0		\$0		\$0		\$15,000.00	
		Sub-total				\$84,286	9.24	\$5,714	0.66	\$0	0.00	\$0	0.00	\$0	0.00
Sub Total for Component 1				\$128,286	10.56	\$21,714	2.97	\$0	0.00	\$0	0.00	\$0	0.00	\$150,000.00	13.52

	GEF Outputs	Budget lines	Description	Year 1		Year 2		Year 3		Year 4		Year 5		Total	
				US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m
Output 2.1:	Capacity on PCB management built/strengthened among government staff in the central and provincial level.	11-00	Consultants	\$48,714	4.5	\$1,286	0.1	\$0	0.0	\$0	0.0	\$0	0.0	\$50,000.00	4.62
		17-00	Nat. Experts	\$25,000	7.2	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$25,000.00	7.21
		51-00	Sundries	\$0		\$0		\$0		\$0		\$0		\$0.00	
		15-00	Project staff travel	\$33,714		\$2,286		\$0		\$0		\$0		\$36,000.00	
		45-00	Equipment	\$111,429		\$18,571		\$0		\$0		\$0		\$130,000.00	
		30-00	Workshops	\$43,286		\$714		\$0		\$0		\$0		\$44,000.00	
		21-00	Subcontracts	\$5,000		\$0		\$0		\$0		\$0		\$5,000.00	
		Sub-total		\$267,143	11.71	\$22,857	0.12	\$0	0.00	\$0	0.00	\$0	0.00	\$0	0.00
Output 2.2:	Capacity built/strengthened among inventory working group to conduct extended PCB inventory in selected provinces covering at least Java island	11-00	Consultants	\$65,000	6.0	\$16,000	1.5	\$0	0.0	\$0	0.0	\$0	0.0	\$81,000.00	7.48
		17-00	Nat. Experts	\$76,143	22.0	\$12,857	3.7	\$0	0.0	\$0	0.0	\$0	0.0	\$89,000.00	25.67
		51-00	Sundries	\$11,429		\$8,571		\$0		\$0		\$0		\$20,000.00	
		15-00	Project staff travel	\$16,000		\$4,000		\$0		\$0		\$0		\$20,000.00	
		45-00	Equipment	\$28,571		\$21,429		\$0		\$0		\$0		\$50,000.00	
		30-00	Workshops	\$15,714		\$4,286		\$0		\$0		\$0		\$20,000.00	
		21-00	Subcontracts	\$0		\$0		\$0		\$0		\$0		\$0.00	
		Sub-total		\$212,857	27.96	\$67,143	5.19	\$0	0.00	\$0	0.00	\$0	0.00	\$0	0.00
Sub Total for Component 2				\$480,000	39.67	\$90,000	5.30	\$0	0.00	\$0	0.00	\$0	0.00	\$570,000.00	44.98

	GEF Outputs	Budget lines	Description	Year 1		Year 2		Year 3						Total	
				US\$	w/m	US\$	w/m	US\$	w/m					US\$	w/m
Output 3.1:	Operating entity selected	11-00	Consultants	\$26,000	2.4	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$26,000.00	2.40
		17-00	Nat. Experts	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0.00	0.00
		51-00	Sundries	\$0		\$0		\$0		\$0		\$0		\$0.00	
		15-00	Project staff travel	\$4,000		\$0		\$0		\$0		\$0		\$4,000.00	
		45-00	Equipment	\$20,000		\$0		\$0		\$0		\$0		\$20,000.00	
		30-00	Workshops	\$20,000		\$0		\$0		\$0		\$0		\$20,000.00	
		21-00	Subcontracts	\$0		\$0		\$0		\$0		\$0		\$0.00	
		Sub-total			\$70,000	2.40	\$0	0.00	\$0	0.00	\$0	0.00	\$0	0.00	\$70,000.00
Output 3.2:	Pilot ESM system for PCBs established on the above sites including labelling, registration, transportation	11-00	Consultants	\$25,520	2.4	\$22,080	2.0	\$18,400	1.7	\$0	0.0	\$0	0.0	\$66,000.00	6.09
		17-00	Nat. Experts	\$21,800	6.3	\$19,200	5.5	\$16,000	4.6	\$0	0.0	\$0	0.0	\$57,000.00	16.44
		51-00	Sundries	\$600		\$2,400		\$2,000		\$0		\$0		\$5,000.00	
		15-00	Project staff travel	\$8,480		\$1,920		\$1,600		\$0		\$0		\$12,000.00	
		45-00	Equipment	\$20,800		\$43,200		\$36,000		\$0		\$0		\$100,000.00	
		30-00	Workshops	\$6,800		\$7,200		\$6,000		\$0		\$0		\$20,000.00	
		21-00	Subcontracts	\$24,000		\$96,000		\$80,000		\$0		\$0		\$200,000.00	
		Sub-total			\$108,000	8.64	\$192,000	7.58	\$160,000	6.31	\$0	0.00	\$0	0.00	\$460,000.00
Output 3.3:	PCB treatment facility established or functional	11-00	Consultants	\$0	0.0	\$20,385	1.9	\$71,442	6.6	\$86,382	8.0	\$39,791	3.7	\$218,000.00	20.12
		17-00	Nat. Experts	\$0	0.0	\$0	0.0	\$40,000	11.5	\$53,333	15.4	\$26,667	7.7	\$120,000.00	34.62
		51-00	Sundries	\$0		\$31,846		\$9,487		\$4,444		\$2,222		\$48,000.00	
		15-00	Project staff travel	\$0		\$26,154		\$27,019		\$21,618		\$9,209		\$84,000.00	
		45-00	Equipment	\$0		\$0		\$1,055,333		\$1,383,111		\$661,556		\$3,100,000.00	
		30-00	Workshops	\$0		\$17,000		\$25,867		\$26,756		\$10,378		\$80,000.00	
		21-00	Subcontracts	\$0		\$0		\$174,800		\$231,467		\$113,733		\$520,000.00	
		Sub-total			\$0	0.00	\$95,385	1.88	\$1,403,949	18.13	\$1,807,111	23.36	\$863,556	11.37	\$4,170,000.00
Sub Total for Component 3				\$178,000	8.64	\$287,385	9.46	\$1,563,949	24.45	\$1,807,111	23.36	\$863,556	11.37	\$4,700,000.00	77.27

	GEF Outputs	Budget lines	Description	Year 1		Year 2		Year 3		Year 4		Year 5		Total	
				US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m
Output 4.1:	Stakeholder engagement including NGOs and civil society established	11-00	Consultants	\$5,000	0.5	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$5,000.00	0.46
		17-00	Nat. Experts	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0.00	0.00
		51-00	Sundries	\$0		\$0		\$0		\$0		\$0		\$0.00	
		15-00	Project staff travel	\$0		\$0		\$0		\$0		\$0		\$0.00	
		45-00	Equipment	\$18,077		\$6,923		\$0		\$0		\$0		\$25,000.00	
		30-00	Workshops	\$7,692		\$2,308		\$0		\$0		\$0		\$10,000.00	
		21-00	Subcontracts	\$10,769		\$9,231		\$0		\$0		\$0		\$20,000.00	
		Sub-total		\$41,538	0.46	\$18,462	0.00	\$0	0.00	\$0	0.00	\$0	0.00	\$0	0.00
Output 4.2:	Development and implementation of training and awareness programs	11-00	Consultants	\$0	0.0	\$24,769	2.3	\$21,231	2.0	\$0	0.0	\$0	0.0	\$46,000.00	4.25
		17-00	Nat. Experts	\$0	0.0	\$8,615	2.5	\$7,385	2.1	\$0	0.0	\$0	0.0	\$16,000.00	4.62
		51-00	Sundries	\$0		\$0		\$0		\$0		\$0		\$0.00	
		15-00	Project staff travel	\$0		\$4,308		\$3,692		\$0		\$0		\$8,000.00	
		45-00	Equipment	\$0		\$0		\$0		\$0		\$0		\$0.00	
		30-00	Workshops	\$0		\$0		\$0		\$0		\$0		\$0.00	
		21-00	Subcontracts	\$0		\$10,769		\$9,231		\$0		\$0		\$20,000.00	
		Sub-total		\$0	0.00	\$48,462	4.77	\$41,538	4.09	\$0	0.00	\$0	0.00	\$0	0.00
Sub Total for Component 4				\$41,538	0.46	\$66,923	4.77	\$41,538	4.09	\$0	0.00	\$0	0.00	\$150,000.00	9.32

	GEF Outputs	Budget lines	Description	Year 1		Year 2		Year 3		Year 4		Year 5		Total	
				US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m
Output 5.1:	M&E mechanism designed and implemented	11-00	Consultants	\$13,286	1.2	\$7,143	0.7	\$30,286	2.8	\$2,857	0.3	\$27,429	2.5	\$81,000.00	7.48
		17-00	Nat. Experts	\$1,667	0.5	\$2,222	0.6	\$2,222	0.6	\$2,222	0.6	\$1,667	0.5	\$10,000.00	2.88
		51-00	Sundries	\$2,000		\$0		\$0		\$0		\$1,000		\$3,000.00	
		15-00	Project staff travel	\$4,000		\$0		\$4,000		\$0		\$8,000		\$16,000.00	
		45-00	Equipment	\$0		\$0		\$0		\$0		\$0		\$0.00	
		30-00	Workshops	\$1,667		\$4,889		\$4,889		\$4,889		\$3,667		\$20,000.00	
		21-00	Subcontracts	\$0		\$0		\$0		\$0		\$0		\$0.00	
		Sub-total		\$22,619	1.71	\$14,254	1.30	\$41,397	3.44	\$9,968	0.90	\$41,762	3.01	\$130,000.00	6.44
	Sub Total for Component 5			\$22,619	1.71	\$14,254	1.30	\$41,397	3.44	\$9,968	0.90	\$41,762	3.01	\$130,000	6.44
	Project total			\$850,443	61.04	\$480,276	23.80	\$1,646,884	31.97	\$1,817,079	24.26	\$905,317	14.38	\$5,700,000.00	151.54
	Project management cost	11-00	Consultants	\$13,200	1.2	\$13,200	1.2	\$13,200	1.2	\$13,200	1.2	\$13,200	1.2	\$66,000.00	6.09
		17-00	Nat. Experts	\$14,000	4.0	\$14,000	4.0	\$14,000	4.0	\$14,000	4.0	\$14,000	4.0	\$70,000.00	20.19
		51-00	Sundries	\$0		\$0		\$0		\$0		\$0		\$0.00	
		15-00	Project staff travel	\$10,000		\$10,000		\$10,000		\$10,000		\$10,000		\$50,000.00	
		45-00	Equipment	\$0		\$0		\$0		\$0		\$0		\$0.00	
		30-00	Workshops	\$22,800		\$22,800		\$22,800		\$22,800		\$22,800		\$114,000.00	
		21-00	Subcontracts	\$0		\$0		\$0		\$0		\$0		\$0.00	
		Sub-total		\$60,000	5.26	\$60,000	5.26	\$60,000	5.26	\$60,000	5.26	\$60,000	5.26	\$60,000	5.26
Project total including management cost				\$910,443	66.30	\$540,276	29.06	\$1,706,884	37.23	\$1,877,079	29.52	\$965,317	19.63	\$6,000,000.00	167.31

ANNEX F: SUMMARY OF FUND DISTRIBUTION

Titles	Financing		
	GEF	COFI	Total
Outcome 1.: Legislation and policies on PCB management, including incentive mechanism, adopted and endorsed to meet relevant obligations under the Convention.	150,000	600,000	750,000
Output 1.1: Policy and regulatory framework reviewed and formulated	60,000	240,000	300,000
Activity 1.1.1: Review and assessment of the existing legal and regulatory framework on PCBs and drafting of a gap analysis report	20,000	100,000	120,000
Activity 1.1.2: Development and adoption of a PCB official guidance.	20000	100000	120,000
Activity 1.1.3: Communication and dissemination on the official guidance.	20000	40000	60,000
Output 1.2: Economic and market-based incentives proposed for disposal of PCB-containing equipment and wastes	90,000	360,000	450,000
Activity 1.2.1: Market analysis based on the cost of testing and disposal options, and PCB inventory	30,000	120,000	150,000
Activity 1.2.2: Proposal of a testing and disposal incentive scheme, including consultation with stakeholders	20,000	60,000	80,000
Activity 1.2.3: Financial and sustainability assessment of the incentive scheme	30,000	120,000	150,000
Activity 1.2.4: Adoption of the final incentive program	10,000	60,000	70,000
Outcome 2.: Strengthened institutional capacities at central government and provincial level in selected provinces	570,000	2,400,000	2,970,000
Output 2.1: Capacity built/strengthened among government staff in the central and provincial level	290,000	1,200,000	1,490,000
Activity 2.1.1: Establish a technical working group for PCB management.	70,000	500,000	570,000
Activity 2.1.2: Assessment of capacity building needs	20,000	100,000	120,000
Activity 2.1.3: Conduct training and workshops at central and provincial level on PCB management	40,000	200,000	240,000
Activity 2.1.4: Laboratory capacity for PCB measurement enhanced.	160,000	400,000	560,000
Output 2.2: Capacity built/strengthened to conduct extended inventory on PCBs undertaken in selected provinces covering at least Java Island	280,000	1,200,000	1,480,000
Activity 2.2.1: Establish and train the inventory team	150,000	400,000	550,000
Activity 2.2.2: Update the inventory of equipment possibly contaminated by PCBs in the selected provinces	30,000	160,000	190,000
Activity 2.2.3: Carrying out sampling of equipment possibly contaminated by PCBs in selected provinces.	80,000	520,000	600,000
Activity 2.2.4: Consolidate the inventory and draft a PCB management plan based on data and priorities	20,000	120,000	140,000
Outcome 3.: ESM of PCBs through proper collection, packaging, registration, labeling, transportation, storage and disposal of targeted PCBs wastes demonstrated	4,700,000	16,972,130	21,672,130
Output 3.1: Operating entity selected	70,000	322,130	392,130
Activity 3.1.1: Assessment of the institutional capacity of candidate entities for PCB handling and disposal.	10,000	62,130	72,130
Activity 3.1.2: Selection of the operating entity for PCB handling and disposal.	10,000	40,000	50,000
Activity 3.1.3: Drafting of a business plan for the operating entity	10,000	20,000	30,000
Activity 3.1.4: Upgrade technical and analytical capacity of the operating entity.	40,000	200,000	240,000
Output 3.2: Pilot ESM system for PCBs established on PCB owners sites	460,000	1,450,000	1,910,000
Activity 3.2.1: Drafting of technical code of practices for the ESM system.	60,000	150,000	210,000
Activity 3.2.2: Implementation of the ESM system (labelling, registration, transportation)	400,000	1,300,000	1,700,000
Output 3.3: PCB treatment facility established or functional.	4,170,000	15,200,000	19,370,000
Activity 3.3.1: Detailed feasibility study on technical options commissioned taking into consideration the PCB management plan	40,000	200,000	240,000
Activity 3.3.2: Technical options selected procured and permitted for the environmentally sound and safe disposal of PCBs and PCB-containing equipment and waste	80,000	200,000	280,000
Activity 3.3.3: Environmental monitoring	200,000	1,300,000	1,500,000

Activity 3.3.4: Treatment of 3000 tons of PCB wastes and PCB-containing equipment	3,850,000	13,500,000	17,350,000
Outcome 4: Increased public awareness on issues concerning PCBs.	150,000	1,800,000	1,950,000
Output 4.1: Stakeholder engagement including NGOs and civil society established	<i>60,000</i>	<i>300,000</i>	<i>360,000</i>
Activity 4.1.1: Drafting of an awareness raising strategy, addressing identification of target (NGOs, industry, scientific institutions, environmental authorities) and preferred target-based communication actions.	20,000	100,000	120,000
Activity 4.1.2: Development of target-based awareness raising materials for each target group identified	40,000	200,000	240,000
Output 4.2: Development and implementation of training and awareness programs	<i>90,000</i>	<i>1,500,000</i>	<i>1,590,000</i>
Activity 4.2.1: Holding of workshops on PCBs for specific target groups including NGOs	20,000	200,000	220,000
Activity 4.2.2: Training for authorities, universities operators, NGOs	20,000	300,000	320,000
Activity 4.2.3: Printing, dissemination, broadcasting	50,000	1,000,000	1,050,000
Component 5.: Effective project monitoring and evaluation implemented	130,000	800,000	930,000
Output 5.1: M&E mechanism designed and implemented	<i>130,000</i>	<i>800,000</i>	<i>930,000</i>
Activity 5.1.1: Establish the Project Steering Committee and hold inception meeting	10,000	100,000	110,000
Activity 5.1.2: Recruit technical experts based on project requirements	10,000	100,000	110,000
Activity 5.1.3: Measure impact indicators on an annual basis	10,000	50,000	60,000
Activity 5.1.4: Prepare Annual Project Reports, Annual Work Plan and Project Implementation Reviews	10,000	200,000	210,000
Activity 5.1.5: Hold annual Project Steering Committee meetings	20,000	100,000	120,000
Activity 5.1.6: Carry out mid-term external evaluation	30,000	20,000	50,000
Activity 5.1.7: Carry out final external evaluation	30,000	20,000	50,000
Activity 5.1.8: Complete the Terminal Report	5,000	50,000	55,000
Activity 5.1.9: Establish a project management information system (MIS).	5,000	160,000	165,000
Project management cost	300,000	1,800,000	2,100,000
Project total	6,000,000	24,372,130	30,372,130

ANNEX G: SUMMARY OF UNIDO IN-KIND CONTRIBUTION

Nature of in kind co-financing	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
UNIDO Indonesia Country Office's contribution (in terms of staff time, space and services, related to: procurement; oversight of consultant services, monitoring and evaluation and consultation with local stakeholders.)	30,000	34,000	37,000	39,000	40,000	180,000
Participation of project beneficiaries/stakeholders in non-GEF funded UNIDO events (participation in workshops, conferences and consultation meetings).	6,000	6,000	5,000	5,000	5,000	27,000
Inter-branch consultation and expertise provision (synergy with the ongoing country/regional projects on environment and energy)	10,000	10,000	8,000	6,000	5,000	39,000
Usage of UNIDO COMFAR for feasibility studies	4,000					4,000
<i>Total, USD</i>	<i>50,000</i>	<i>50,000</i>	<i>50,000</i>	<i>50,000</i>	<i>50,000</i>	<i>250,000</i>