



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: Environmentally sound management and disposal of PCBs wastes and PCB contaminated equipment in Sri Lanka			
Country(ies):	Sri Lanka	GEF Project ID: ¹	5314
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	130004
Other Executing Partner(s):	Ministry of Mahaweli Development and Environment (MMDE) , Ministry of Power and Energy (MPE)	Submission Date: Resubmission Date:	10/31/2014 02/19/2015 02/24/2015
GEF Focal Area (s):	Persistent Organic Pollutants	Project Duration(Months)	60 months
Name of Parent Program (if applicable): ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/>		Project Agency Fee (\$):	448,875

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	Outcome 1.4.1	GEF TF	4,725,000	18,989,752
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
Total project costs				4,725,000	18,989,752

B. PROJECT FRAMEWORK

Project Objective: The project will build capacity in Sri Lanka to introduce and implement an environmentally- sound management of PCB wastes stockpiles and PCB-containing equipment.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
1. Institutional strengthening and awareness raising	TA	Institutional capacities and stakeholders' awareness on PCB issues strengthened	1.1 Technical and human resources capacity for PCB management and disposal strengthened; 1.2 PCB inventory on the utility sector verified and completed;	GEF TF	550,000	2,000,000

¹ Project ID number will be assigned by GEFSEC.

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

			1.3 Stakeholder awareness and engagement (including NGOs and civil society) established.			
2. Policy and regulatory framework	TA	Policy and regulations relevant to PCBs formulated and enforced	2.1 Policy and regulatory framework developed and enforced for PCB management.	GEF TF	250,000	1,000,000
3. Disposal of PCBs, PCB-containing equipment and wastes	Inv	ESM of PCBs established in Sri Lanka	3.1 PCB wastes collected, packaged, transported and safely stored; 3.2 PCB wastes disposed and PCB-containing equipment decontaminated based on selected technical option; 3.3. Long-term strategy on PCB management developed	GEF TF	3,400,000	14,589,752
4. Impact Monitoring and Evaluation	TA	Project management and M&E established	4.1 M&E framework designed and implemented (according to UNIDO and GEF M&E policies)	GEF TF	300,000	500,000
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					4,500,000	18,089,752
Project management Cost (PMC) ³				(select)	225,000	900,000
Total project costs					4,725,000	18,989,752

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

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$) ¹
National Government	Ministry of Power and Energy	Cash	1,549,860
National Government	Ministry of Power and Energy	In-kind	92,708
National Government	Ministry of Mahaweli Development and Environment	In-kind	179,028

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

National Government	Ceylon Electricity Board	Cash	12,685,567
National Government	Ceylon Electricity Board	In-kind	3,171,392
National Government	Central Environment Authority	In-kind	142,663
National Government	Lanka Electricity Company	In-kind	95,130
National Government	Industrial Technology Institute (ITI)	In-kind	177,667
Private Sector	LTL Transformers (Pvt) Limited	Cash	54,971
Private Sector	LTL Transformers (Pvt) Limited	In-kind	340,694
Private Sector	Geocycle	Cash	201,093
Private Sector	Geocycle	In-kind	59,129
GEF Agency	UNIDO ²	Grant	89,850
GEF Agency	UNIDO	In-Kind	150,000
Total Co-financing			18,989,752

¹ Based on Feb 2015 UN Exchange Rate *1 USD = 132.27 LKR

² 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
(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	481,000	142,000	623,000
National/Local Consultants	503,000	1,238,000	1,741,000

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.

The project structure presented in the discussions below is consistent with those presented in the PIF. Outcomes and outputs for Component 3 have been streamlined. Further elaboration of the project framework is provided below.

1. The National Implementation Plan (NIP) for the Stockholm Convention of the Democratic Socialist Republic of Sri Lanka identified phase-out and disposal of PCBs as one of the priorities requiring immediate attention and action. The country signed the Convention on 05 September 2001 and ratified it on 22 December 2005. The National Implementation Plan (NIP) was formulated with the assistance of the United Nations Environment Programme (UNEP) and was transmitted on 28 September 2007. Two country reports have so far been submitted on 31 December 2007 and 27 September 2010, respectively. The rationale and objectives of the project were derived from the priorities and key objectives established by the NIP: (i) Develop and put in place legislation for PCB management; Establish full inventory of PCB containing equipment; (ii) Establish procedures for equipment maintenance; Establish appropriate PCBs analysis laboratory facilities; (iii) Establish and implement guidelines for phase out, transportation; Storage and disposal of PCBs equipment; (iv) Establish progress monitoring mechanisms; (v) Capacity building for control and management of PCBs and; (vi) Disposal of existing stocks and stockpiles. The NIP is currently being reviewed and updated with the assistance of UNIDO.
2. The National Development Framework, "Mahinda Chinthana - a Vision for Future", is a country report prepared for the United Nations Conference on Sustainable Development (Rio +20) to present the action taken by Sri Lanka during the past twenty years in moving towards achieving sustainable development, and to indicate the way forward. The document emphasizes the need for all industries in the country to operate in an eco-friendly manner through the introduction of effective waste management systems. In the industrial pollution prevention and control targets for Y 2016, 80-100% of hazardous industrial wastes are aimed for proper collection and disposal.
3. The National Action Plan for Haritha Lanka Program (2009) by the National Council for Sustainable Development serves as the country's cohesive program of action for sustainable development. In its Mission 6: Doing Away with the Dumps, the prevention of the accumulation of hazardous wastes in non-hazardous waste streams, specifically, the establishment of public-private partnerships (PPP) in providing services for hazardous waste management was mentioned as a strategy.
4. The draft report (ver. March 2012) of the National Portfolio Formulation Exercise (NPFE) for GEF Cycle V, prepared by the Ministry of Environment, Government of Sri Lanka (GoS), identified the concept "POPs Enabling Activities and Phasing-Out – Complete Life-Cycle Management of the Chemicals in an Environmentally-Sound Manner" as a priority requiring funding.

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

5. 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 focuses on the environmentally sound management (ESM) of PCBs and will mobilize funds for investing in safe control, management and disposal of PCBs and PCB-containing equipment and wastes in the country. The project will create a self-financed sustainable system through the involvement of private companies providing services for collection, transport, interim storage and final disposal of PCBs under the control of responsible governmental institutions in accordance with strengthened legislative framework.

A.3 The GEF Agency's comparative advantage:

6. UNIDO is within the comparative advantage matrix set out in GEF/C.31/5 rev.1. UNIDO's operation has been extensively carried out in the POPs focal area of GEF, in particular. UNIDO has implemented environmentally

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.

sound management of PCBs in Asia and other regions and has accumulated sufficient knowledge and experiences in implementing GEF projects. UNIDO has built a solid portfolio in the area of PCB management comprising about 45% of its current post-NIP projects. These include successful implementation of PCB projects in Armenia, Macedonia and Romania. It also has an ongoing PCB portfolio in Mongolia, Philippines, Azerbaijan, Peru, India, Nepal, Morocco, Ukraine, Bolivia and Russia.

7. UNIDO's approach on PCB management focuses on the delivery of assistance to create the required fundamental capacities within government, institution and PCB owners to comply with the PCB-related obligations under the Stockholm Convention on POPs. It 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. UNIDO PCB projects endeavor to strengthen regulatory and legislative infrastructures and relevant institutions at national and local levels to manage PCB-containing equipment and waste in an environmentally sound manner. More importantly, it strives to transfer of environmentally-sound technologies to institute know-how for local PCB treatment and elimination. 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.
8. UNIDO capitalizes on the organization's institutional network such as NCPCs, ITPOs, Field Offices and local UNIDO Desks for the close monitoring of its projects. There is currently an on-going UNIDO project on "Phase II- Up-scaling of the activities/ services provided by the National Cleaner Production Centre in Sri Lanka" aiming to contribute to sustainable industrial development and sustainable consumption and production in Sri Lanka through uptake of Cleaner Production (CP) concepts, methods, policies and practices. The GEF project may benefit from the outputs and experience of the CP project on the introduction of an ESM for PCBs.
9. UNIDO's Country Programme of Technical Cooperation with the Democratic Socialist Republic of Sri Lanka 2010-2014, includes in the program components, the introduction of environmentally-sound technologies as well as required service infrastructure. This is also in support of the UNDAF Sri Lanka 2013-2017 Outcome on Environmental Sustainability, Climate Change and Disaster Risk Reduction, particularly in putting in place policies, programs and capacities to ensure environmental sustainability at national, sub-national and community levels.

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

I. Baseline Situation

i. Overview of PCB issues in Sri Lanka

10. The general framework of Sri Lanka's environment policy is contained in the National Environment Policy and Strategies (NEPS) of 2003, which paves the way for sustainable development and deals with all the sectors related to the environment. This programme mainly deals with the preservation of land, water, atmosphere and biological diversity. It also refers to environmental strategies for the key economic sectors, namely forestry and wildlife, agriculture and mining, fisheries, tourism, energy and transport, health and urban development. The plan also mentions participation from the civil society in the field of education, awareness and communication programmes.
11. Sri Lanka's environmental problems are clearly linked to poverty and population pressure. As such, the country's policies seek to strengthen capacity at global, national and community levels through the implementation of international conventions and protocols, such as the Stockholm Convention, which involves the inventory and phasing-out of Sri Lanka's POPs and the incorporation of environmentally sound management of hazardous chemicals and waste. Sri Lanka signed the Convention on 5 December 2001 and ratified on 22 December 2005. The Ministry of Mahaweli Development and Environment (MMDE), formerly Ministry of Environment and Renewable Energy (MERE), serves as the national focal point to the Stockholm Convention and will be the national executing partner for this proposed project
12. The management of polychlorinated biphenyls (PCBs) has been identified as a priority problem in the NIP though Sri Lanka never produced PCBs. Specific problems related to PCB management and which the project aims to address include: (i) Lack of adequate legislation to control imports; (ii) Environmental impacts and baseline levels not adequately studied; (iii) Lack of sufficient resources for identification and analysis; (iv) Lack of acceptable

treatment, disposal and storage systems for PCB contaminated oils and equipment; (v) Contaminated sites yet to be identified; and, (vi) Cross contamination of non-PCB oil with PCB oil. Also, the Government faces various constraints in solving the PCB problem: (i) low level of awareness and equally low level of resources allocated for information campaigns; (ii) weak enforcement mechanisms (lack of technical capability to detect and regulate PCBs in use and releases to the environment, and to control PCB imports); (iii) lack of sustained commitment from other government functionaries; and, need for increased private sector participation (e.g. unwillingness of PCB owners to pay for proper PCB treatment).

13. In a 2006 inventory, it was estimated that 1,060 of the transformers manufactured on or before 1986 (i.e. period of global PCB production) are contaminated with PCBs. The contamination is assumed to have taken place during maintenance activities or the inadvertent use of PCB contaminated oil. It was estimated that about 1000 tons of PCBs, PCB-containing equipment and wastes exists in the country, and thus the amount of disposal for this project is based on the preliminary NIP inventory. A reassessment of the inventory was carried out in 2012. Based on the 2012 inventory, there are 2210 transformers in Sri Lanka manufactured before 1986, of which around 48% is considered PCB contaminated based on results of a limited number (around 10%) of transformers tested with the Clor-n-oil test kits subsequently verified by GC/MS. Unfortunately, it seems that the contaminated transformers cannot be easily tracked back, therefore it will be necessary to redo the analysis when carrying out the PCB Inventory. The NIP inventory also showed that transformers used in Sri Lanka have been imported from over twenty countries and cover many models produced for Generation, Transmission and Distribution. Of the estimated 18,500 transformers in the electricity and industrial sector, a very few pure PCB transformers have been identified. Initially, it was assumed that only transformers manufactured before 1986 had high probability of containing PCB. However, sampling across different years of manufacture using field test kits and laboratory analysis indicates that there is a very high degree of cross contamination of even non-PCB transformers during routine maintenance even among relatively new transformers. Thus, on subsequent random sampling of “Non PCB” transformers, a several PCB contaminated transformers (within the range of 50-2000 ppm PCB) have been identified. The contamination is assumed to have taken place during maintenance activities or the in adverted use of PCB contaminated oil.
14. Ceylon Electricity Board (CEB) and Lanka Electricity Corporation (LECO) are the main transformer owners in Sri Lanka. Maintenance services are provided by CEB Maintenance Branch at Piliyandala (medium voltage) and repairs are done by Lanka Transformers Ltd (LTL) at Homagama and Sapugaskanda. The Industrial Development Board (IDB), mandated for management of scrap from the public sector, acts as intermediate for procuring decommissioned transformers. Currently, there are around 2500 phased out transformers owned by the Ceylon Electricity Board (CEB) in Sri Lanka, partially stored at LTL and LECO sites, and partially stored on site. These transformers are usually resold for scrapping through IDB. All decommissioned transformers by LTL at their Homagama yard and by LECO at their Waskaduwa yard have been sold to IDB. IDB, in turn, scrap the transformers to sell the copper and oil to small scale recyclers, who are engaged in manufacturing of welding transformers, battery charging, motor winding etc. throughout the country. Oil is also sold to welders, garage owners and people using oil for domestic purposes. This practice of reusing transformer oil is a major cause of concern and there is an urgency to address this issue. In fact, in a report published by the People to People Volunteer entitled "*Study of exposure to PCBs and its health effects among welders in Kalatura district*" (full report in **Annex H**), it was verified that transformer oil is being used as a coolant oil in welding plants and the possibility of self- and cross-contamination among welders and families are high due to lack of awareness on the ill-effects of PCBs. Also, during a visit to the LECO yard in the PPG phase, draining of a possibly PCB-contaminated transformer was witnessed by the team (see photos in **Annex I**). The MMDE has already issued an official notice to CEB to stop auctioning used oil that has not been checked as PCB-free. However, awareness of the small- scale recyclers and the public in general still needs to be enhanced.
15. There is a current pressure to sell the decommissioned transformers in the LTL yard for scrapping. As part of the PPG phase of the PCB project, a committee, comprising of various relevant stakeholders working on the PCB issue, was created to decide on the disposal of decommissioned transformers. To ensure that PCB-containing transformers are not auctioned for scrapping, CEB was tasked to conduct a detailed inventory of the transformers currently stockpiled in the yard. The detailed inventory results are presented in **Annex J**. From the inventory list, PCB analysis will be undertaken by the Industrial Technology Institute (ITI), prioritizing those transformers that were manufactured before 1986. Only PCB-free transformers may then be auctioned. For transformers found to

contain PCBs or are PCB-contaminated, it is agreed that they will be transported into an interim storage for safeguarding until a final disposal scheme is put into place.

ii. Institutional and Regulatory Framework

16. The Ministry of Environment and Renewable Energy (MERE), now Ministry of Mahaweli Development and Environment (MMDE), is the focal point for the Stockholm Convention in Sri Lanka. As such, it is responsible for preparation of the NIP and solicits other relevant Government and non-governmental institutions for its implementation. The National Coordinating Committee established by the ministry will coordinate and monitor as well as be responsible to update the NIP periodically based on the progress to fulfil the objectives of the Convention. The institutions mentioned in the next paragraphs will play major roles in implementing the action plans on PCB management as set out in the NIP.
18. The Central Environmental Authority (CEA) was established in August 1981 under the National Environmental Act no.47 of 1980. The MMDE has the overall responsibility in the affairs of the CEA with the objective of integrating environmental considerations in the development process of the country. The CEA was given wider regulatory power under the National Environment Amendment Acts no. 56 of 1988 and no. 53 of 2000. It is responsible for the issuance of clearances and maintain the environmental standards in accordance with the National Environmental Act of 1980 and its amendments.
19. The Ministry of Power and Energy is (MPE) is the main body responsible for the management of the Energy Sector in Sri Lanka as a whole. The Ministry consists of several Divisions to discharge its functions in Planning, and in the Management of sub -sectoral state institutions. The Ministry of Power & Energy is the key organization instrumental in the formulation of policy on the energy sector. The entities described below are institutes affiliated with the MPE:
 - i) The Ceylon Electricity Board (CEB) is a body corporate established by the Act No. 17 of 1969. It is empowered to generate electric energy, transmit the same, and distribute it to reach all categories of consumers. The roots of CEB can be traced much back in the past, going right up to the days of the Department of Governmental Electrical Undertaking, the predecessor of CEB. Currently CEB provide energy to more than 90% of the country. To carry out its role, the CEB has acquired a large base of physical assets, including generating stations, substation complexes, transmission lines and distribution networks located in all parts of the country. With this mandate, CEB is, obviously, the largest owner of the decommissioned transformers (probably containing PCBs).
 - ii) Lanka Electricity Company (Pvt) Ltd (LECO) was established in 1983 to distribute electricity in areas, which were previously served by Local Authorities (Municipal Councils etc.). LECO receives electricity from CEB at 11 kV and distributes in LECO franchise areas. LECO serves about 11% of the customers in the country. LECO's franchise area steadily increased from 1983 to 1990, and the Company implemented a major rehabilitation program in the newly acquired distribution networks, that reduced the losses from 33% in 1990 to 5.3% in year 2003.
 - iii) LTL Trasformers (PVT) Ltd, was established in 1982, as a joint venture of Ceylon Electricity Board the Power Utility of Sri Lanka and European Investors initially to produce an indigenous transformer. It was originally a transformer repair and maintenance facility. The company's transformer production line developed with an ongoing Technical Collaboration Agreement with ABB AS of Norway. Today, the Company's state of the art production facilities manufacture high quality transformers conforming to international standards and meeting the entire Sri Lankan requirements while about 50% of its productions are exported. LECO still does transformer repair and maintenance and has a preventive measures in place to ensure that PCB transformers are properly managed.
20. The Industrial Development Board (IDB) comes under the Ministry of Traditional Industries and Small Enterprise Development and is the prime State Organization established for the Promotion and Development of Industries in Sri Lanka. Among others, IDB provide the following services: Identification of Business Opportunities, Quality and Productivity Improvement, Project feasibility studies and reports, Product Development, Innovation and new Technologies, Engineering Workshop and Foundry Facilities, Infrastructure Facilities, Engineering Services. Currentl, IDB is the only institution mandated for scrap (including transformers) management in the country.

21. The Industrial Technology Institute (ITI) is a wholly owned institute of the Government of Sri Lanka and functions under the jurisdiction of the Ministry of Technology & Research. (ITI) is the successor to the Ceylon Institute of Scientific and Industrial Research (CISIR). The Science and Technology Development Act No.11 of 1994 that came into effect on 01 April 1998 describes in detail the ITI mandate, which includes technical and scientific support to industry, technology transfers, training, environmental monitoring and remediation, research and development.
22. Currently, there is still no legislation in place to compel owners to provide information on equipment that may be containing PCBs. At present, PCB wastes are controlled through the National Environmental Act (NEA), No.47 of 1980 which prohibits the generation, collection, transport, storage, recovery, recycling or disposal of waste or establishment of any site or facility for the disposal of any specified waste, except when in possession of a license issued by the Central Environment Authority and in accordance with such standards and other criteria as may be specified. Codes have been assigned for PCB-containing equipment/materials, for easy identification and control of importation.
23. Gazettes related to POPs chemicals include: (a) Government Extraordinary Gazetter no. 1813/14 of June 2013 and no. 452/4 of May 1987 under the Import and Export Control Act; (b) Gazette Extraordinary no. 1627/19 of November 2009 and National Environment (Protection & Quality) regulation no. 01 of 2008 by gazette notification no 1534/18 with a prescribed list of waste which refers as scheduled waste and; (c) National Environmental (Protection and Quality) Regulation no.1 of 1990 by publishing part II in the Gazette Extraordinary no. 924/13 dated May 1996. These gazettes (c) and (b) are amendments made under the NEA no. 47. However, no specific regulations exists for PCB management in the country apart from the Custom Code.

II. Baseline Projects

During the PPG phase, an analysis of Sri Lanka's institutional infrastructure revealed a framework that maybe enabled to implement a sound management of PCBs in the country. The main challenge is how to piece together the initiatives and the existing infrastructures as a collective whole to create a harmonized scheme leading to an efficient and well-informed network on the management of PCBs. Sri Lanka has statutes and acts governing environmental management. However, the existing frameworks for industrial chemicals management is pretty weak (Assessment Report on current situation of implementation of Basel, Rotterdam and Stockholm Convention in Sri Lanka, 2014. **Annex K**).

Baseline Projects for Component 1: Institutional Strengthening and Awareness Raising

24. Under Component 1, Sri Lanka has the *right* institutions that can be further assisted and strengthened to include ESM of PCBs under their mandate. The country produces transformers through LTL, a former transformer repair and maintenance facility, ensuring that PCB-free transformers are available in the local market. Currently, 50% of the transformers produced (3500 pieces/year) are exported, whilst the remaining 50% was placed in the internal market in the recent years. LTL produced and sell mostly distribution transformers (100 Kva). LTL has the monopoly of the Sri Lanka transformer production and has currently a technical collaboration with ABB, which was previously one of the shareowner of the company. The company is currently 100% owned by CEB. The facility includes a storage facility for old transformers, pending their maintenance or disposal. LTL has maintained its function as a transformer repair and maintenance shop and has incorporated measures to manage PCB-containing transformers . LTL requires transformers owners to submit a PCB free certificate, or a certificate of analytical determination of PCB prior to accept their transformers for maintenance or disposal. LTL declared also that only two buyers are currently authorized for buying recycled transformer oil: Spectra and Holcim. Before sending used oil to these buyers, LTL perform an analytical determination of PCBs in the oil. With these measures, the possibility that the oil stored at LTL premises is contaminated by PCBs is low. In addition , LTL ensures safe storage of transformers for by placing them on a concrete pavement to prevent contamination of the environment. LTL's experience and expertise on transformer maintenance makes them a good candidate as an operating entity for a transformer washing system that maybe provided by the GEF project to address decontamination of decommissioned transformers.

25. There is a good analytical capability in the country to carry out PCB analysis. The NIP list a large number of laboratories (ITI, Registrar of Pesticides, SGS , TRI, University of Ruhuna, University of Colombo, NARA, City Analyst Lab, University of Moratuwa, Govt. Analyst Dept., IFS, CRI and NWSDB.) in Sri Lanka with chromatographic facilities. However, only ITI, and SGS (private laboratory) carries out analysis of PCB and industrial chemicals. The Industrial Technology Institute (ITI), a government-owned institution under the Science and Technology department, has the capability for PCB analysis . A number of other laboratories (e.g. academic) with GC-ECD/GC-MS capability are also able to analyse PCBs. A visit to the ITI laboratory during the PPG stage confirmed the capacity of the lab to carry out PCB analysis in dielectric oil but has limited human resources to carry out the task and a necessary upgrade of its analytical facilities should be undertaken. It is already providing services related to the PCB determination in the transformer oil, for LECO, LTL and for the two companies which are authorised to buy used oil from LTL. However, there is currently no laboratory in Sri Lanka that has accreditation for PCB analysis. With the assistance of the GEF project, ITI may beef up its human resources and analytical infrastructure and may be considered as a candidate for future government certification/accreditation.
26. For awareness raising, NGOs has played a significant role in the dissemination of information on POPs to the general public and relevant stakeholders. MMDE has recognized the roles of the NGOs in the decision making process of sustainable development issues and included a NGO participation provision in the National Environmental Action Plan. Many environmental NGOs in Sri Lanka have been involved in discussions, debates and activities related to sustainable development at local, national and international levels. For PCB issues, the *People to People Volunteers* and *Center for Environmental Justice* have been major players in raising awareness on this subject. Awareness-raising campaigns aimed at various stakeholders including local authorities, welders and school children have been undertaken. Information materials, including leaflets, brochures, workshops, local newspaper articles, internet circulations, programmes in local radio channels and exhibition were used as tools for awareness. A POPs training module was translated in to the local language for use in training programmes. However, there is still an apparent need to reach out to as many audience and stakeholders, as possible.

Baseline Project for Component 2: Policy and Regulatory Framework

27. To meet the project objectives and the country's obligations to the Stockholm Convention , the Government of Sri Lanka, through its relevant ministries, 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 MMDE, Ministry of Health, , Ministry of Industry, Ministry of Power and Energy and Ministry of Traditional Industries and Small Enterprises Development. As part of the baseline project, the GoS, through the MMDE, 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 deadlines according to the provisions of the Stockholm Convention. In preparation for this plan, the GoS is planning to issue a policy guideline on the reporting, control, use and disposal of PCBs and PCB-containing equipment in the country.
28. The Central Environment Authority has recently amended the National Environmental Act to regulate the import, production or use of specified materials, substances or chemicals which will be harmful for human health and environment by the gazetting of the substances covered under the SC and Basel Convention, including PCBs, through the Import and Export Control Act (*Government Extraordinary Gazette no. 1813/14 of June 2013 and no. 452/4 of May 1987 under the Import and Export Control Act*). PCB regulation must be improved to set the standard for PCB and also to compel PCB owners to adhere to environmentally-sound management (ESM) of PCB-contaminated oil, equipment and wastes. This will be done through the issuance of Guidelines on ESM of PCBs. CEA's capacity to monitor the extent of PCB contamination in the country, as well as current management practices, has to be enhanced. The GEF project will assist in the the assessment of the existing regulations and development/formulation of PCB-related legislation.
29. As described above, a Committee has been formulated with the combined directive of the MMDE and Ministry of Power and Energy to ensure that unserviceable transformer management in the country incorporate measures to ensure that PCB-containing equipment and PCB-contaminated mineral oil are properly managed. The membership of the committee includes all relevant stakeholders - CEB, LECO, LTL, ITI and Holcim. This Committee will be sustained during the GEF project to ensure that decisions on this issue are made in accordance to international (and national) guidelines.

Baseline Project for Component 3: Disposal of PCBs and PCB-containing equipment and wastes

30. There has been some initiatives in the country to dispose of PCB stockpiles from decommissioned transformers. MMDE has confirmed that activities have been planned for the disposal of PCB-contaminated oil in stock with LECO. Around 7M LKR (approximately 54,000 USD) from MMDE budget has been allocated for the disposal of this stockpile. The waste oil will be handled by Geocycle and disposed through Cement-Kiln Co-Processing at Holcim's Puttalam plant. However, the amount of the LECO stockpile (about several liters) is quite insignificant considering the assessment of the PCB inventory in the country. Thus, funding and technical assistance is required to completely dispose/decontaminate the PCB wastes in the country.
31. The Holcim Puttalam Cement was commissioned by ITI to study the disposal of PCBs from transformers coming from the upgrade of Kelanithissa Power Station. Holcim retrofitted its cement kiln to incorporate an injecting facility to introduce PCBs to the kiln. The trial burn was carried out with an overall amount of 10,000 liters of pyralene, containing 56-62% of PCBs, 33-38% tri-chloro-benzene, 5-6% tetra-chloro-benzene. The measured DRE for PCB was greater than 99.999999 (Source: Basel Convention, Cement kiln co-processing - annex to POPs technology Specification and Data Sheet, in: John Vijgen, International HCH and Pesticides Association and Dr. Ir. Ron McDowall, Auckland New Zealand for Secretariat of the Basel Convention Date: 11.08..2008) The samples taken from the stack during the trial burn were sent to two accredited laboratories in Australia and New Zealand. This operation was monitored by CEA & PEA of North-western Province. After the trial run with a small quantity of PCBs, evaluation of the efficiency of the incineration was carried out. The Holcim cement plant in Puttalam is currently scheduled for a production of around 1,200,000 t/y. Currently, the facility is fed with 70% coal and 30% furnace oil or waste oil. The activities of waste management are implemented by its hazardous wastes management unit, Geocycle. The Holcim facility currently has systems for the mixing and injection of waste oil and PCB contaminated oil installed. Recently, around 6 M Lanka Rupees (near 45,600 USD) was invested for the procurement of a shredder for pesticide containers. This shredder could be used for shredding PCB contaminated cardboard extracted for PCB contaminated transformers, but is not suitable for shredding the wooden part of PCB transformers which would need an additional dedicated shredder. During the visit, it has been confirmed that the maximum concentration allowed for burning PCB oil is in the order of 5000 ppm (0.5%). At the current feeding rate, that concentration corresponds to a disposal rate of 5kg 100% pure PCB per hour.

Considering the indicative cost of disposal for low-level PCB oil (USD780/ton) conveyed to the MMDE in previous discussions, the Holcim Puttalam plant maybe utilized to address PCB disposal in Sri Lanka. However, cement co-processing addresses only PCB-contaminated transformer oil and probably, the transformer paper. The country needs to plan for a transformer cleaning system to decontaminated carcasses, especially, if they are to be scrapped. It is planned that a feasibility study be undertaken during the project implementation to assess other possible alternatives/technologies that maybe provided to the country to have a holistic PCB management scheme. LTL is being considered as the operating entity of the transformer decontamination system based on their experience and expertise on transformer maintenance and repair.

- 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 proposed GEF project will assist the country to strengthen human and institutional capacities to manage the PCB issues in the country. It will introduce environmentally-sound management of PCBs allowing the dissemination and replication of the best practices for PCB management and disposal. The following describes the associated activities of the GEF project:

Component 1: Institutional strengthening and Awareness raising

Component 1 addresses institutional capacity building and awareness raising. As discussed in the baseline scenario, technical and analytical capacities of relevant stakeholders need to be strengthened to provide good foundation in addressing PCB issues.

32. The GEF project will assist in the conduct of an in-depth and a more widely-covered inventory of the PCB wastes and equipment in the utility sector. The inventory is also aimed at establishing a database on PCB owners, PCB

contaminated oil which may be regenerated and PCB stockpiles and wastes that may be directly disposed. It is envisaged that analysis of the rest of transformers manufactured before 1986, or around 2,034 transformers, will be done in the first phase of the project. The inventory activities will be extended to include transformers in the North-East areas, as well as transformers repaired and maintained from 1986 to the time PCB content was analyzed and became a criteria for accepting transformers for maintenance. Those equipment appearing from the Customs Department records as having entered the country under the PCB HS Codes will also be included in the inventory. Capacitors and other electrical equipment that may contain PCB will also be checked. Thus, a full inventory of the utility sector is envisaged in the baseline project. The capability of government to undertake the inventory will be strengthened. This will be done through training to be conducted by international experts, providing guidance on sampling (including for other electrical equipment), criteria for chain of custody, use of PCB field test kits (i.e. Dextsil Analyzer), labelling of equipment, data collection and management through a database. The trainees will be inspectors from the Central Environment Authority (CEA), staff from the MMDE, technical staff and technicians handling transformer maintenance and repair of CEB/LTL/LECO and relevant private entities.

33. Capacity building efforts will also be directed to government officials at the central and provincial levels, managers and workers at state-owned utilities (i.e, Ceylon Electricity Board) and private entities (industry, transformer manufacturers, transformer service provider, academia, relevant association, NGO, etc). Training will be provided by national and international experts to share knowledge on how to identify PCB to and to establish mechanism in industry to prevent leakage and cross contamination, safe handling and storage of the equipment in the industry site. ESM of PCBs shall also be properly disseminated among relevant stakeholders including conduct of inventory, proper registration, labeling and storage of PCB wastes and PCB contaminated equipment. The project will also enable the strengthening of technical capacities for analysis of PCBs especially of additional human resources that maybe tapped by ITI during the inventory phase.
34. For the awareness raising activities, the project may partner with NGOs which have already been involved in POPs information dissemination activities, like the People to People Volunteers and the Center for Environmental Justice. NGOs maybe tapped to conduct forums/awareness raising activities to local authorities, electricity boards, technicians, scrap yard workers, wives and children of men working in a relevant sector and the general public.

Component 2: Policy and Regulatory Framework

35. Component 2 targets the formulation of guidelines and policies relevant to PCBs. It aims to propose both regulatory and market-based instruments (e.g. pollution charges, cost-effective disposal through PPP arrangements, tax and duty free importation of fresh oil to replace contaminated stock) to encourage PCB owners to declare and dispose of their PCB stockpiles. Policies also needs be instituted with regard the market of the recycling of transformer oil to avoid spread of contamination and possible health impacts to the workers and their families. The project will help Sri Lanka regulate the oil recycling sector making sure that PCB oil is not recycled and distributed for further use. This is one significant issue that will be addressed through the assistance of the GEF ensuring protection of human health and the environment from the adverse effects of PCBs.

Policies/guidelines will be widely disseminated to relevant stakeholders and enforcement will be put in place to achieve the commitment of a PCB-free country before 2028. The GEF project will take into consideration the sustainability of the proposed regulatory instruments based on the experience from other similar projects.

Component 3: Disposal of PCBs, PCB-containing equipment and wastes

36. Disposal of around 1000 tons of PCBs (as per initial NIP inventory) will be undertaken under Component 3. It is plan to establish an ESM system in selected PCB owners sites for demonstration including labelling, registration and packaging of PCB wastes and PCB-contaminated equipment. Considering the plan to scrap the decommissioned transformers in the LTL and LECO yards, the project can support the safeguarding of PCB-contaminated transformers by transporting them in an interim storage to be decided by the Government. Transport and storage will follow the ESM guidelines of the SC.
37. The inventory data is the best criteria to determine the technology options that maybe applied in the country. Comparison of different scenarios, cost-benefit analysis and studies of economic and market conditions is

undertaken to ascertain the most viable and applicable technology or mechanism that may be introduced or utilized to address PCB management in the country. It would also ensure that the chosen technology complies with the standards set by the Stockholm Convention standards. For Sri Lanka, however, the presence and experience of the Holcim Cement facility in Puttalam on PCB disposal is an advantage. PCB disposal via the Holcim plant will be considered provided that the disposal price is competitive to that of the global market. The project can support by conducting a technology assessment of the existing CKCP plant, determining the techno-economic viability of the arrangement and the plant's compliance with the BAT/BEP requirements of the Stockholm Convention. In addition, it is also envisaged that the GEF project will help support the provision of a transformer PCB decontamination system to Sri Lanka to address decommissioned transformers and those that will be re-used.

38. The GEF scenario will support the baseline project by providing a holistic environmentally-sound management of PCBs in Sri Lanka. A detailed PCB phase-out plan will be developed and a strategy for priority setting will be established and applied, inviting all stakeholders into the decision making process. This will ensure that Sri Lanka will attain its objectives to be PCB-free according to the deadlines set by the Stockholm Convention.
39. While some initiatives are already being mobilized in the country, financial and technical assistance is required to enable the country to step up its programs on PCB management curtailing further cross-contamination and harmful disposal of PCBs. 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.
40. With the assistance of the GEF, Sri Lanka 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 Sri Lanka 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.
41. With the assistance of the GEF, Sri Lanka will be assisted in meeting its obligations under the Stockholm Convention and thus, will contribute to global efforts to eliminate PCBs. 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.

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:

The table below presents the potentials risks that might prevent the achievement of the project objectives:

Assumptions and Risks	Risk Level	Mitigation Measures
Outcome 1.: Institutional capacities and stakeholders' awareness on PCB issues strengthened		
Training effectiveness limited or not properly assessed due to limited participation or limited quality control	L	To be able to participate in the training sessions, candidate will have to pass an initial test which will serve also as baseline; and a final test, which will demonstrate the progress achieved and hence effectiveness of the training. The trainees passing the final test will receive an official certificate issued by (by the implementing and executing agencies). The above will ensure at the same time willingness to attend training course and quality/effectiveness of the training
Stakeholders and interest groups not properly identified; Awareness and training program not properly targeted to the audience	L	A specific activity on the identification of stakeholders and their needs has been carried out at the PPG stages. Awareness and training programs will be based on the result of awareness and training gap analysis carried out during the PPG stage.

Outcome 2.1. Policy and regulations relevant to PCBs formulated and enforced		
Delays in developing and enacting new PCBs guidelines and regulations	M	The MMDE, CEB, LTL, IDB and other key stakeholders will participate as equal partners in developing the guidelines and regulations.
Lack of national support for the enactment of regulations to manage PCBs	L	The preparation of the new regulations would be an open exercise with participation of all stakeholders. There is a general understanding of the country's obligations under the Stockholm Convention and the need to have the proper tools to deal with PCBs
PCB-owners' reluctance to comply with new regulations	L	In the course of the PPG stage, a great effort has been paid to secure the commitment of electric power industry, by means of a two-fold raising awareness activity: on one side, the government made clear to the electric sector its willingness to effectively improve and enforce a PCBs regulation which will ultimately requires owners of electrical equipment to test their equipment for PCB content and adopt the necessary countermeasures. On the industry side, the owners of contaminated equipment understood that to not address timely PCB issue would eventually result in a very high liability and financial risk, and perceived the project as a valuable resource not only to solve the environmental problems related to PCBs but also to established a green business aimed at the ESM management of PCBs.
Outcome 3.1 Disposal of PCBs, PCB-containing equipment and wastes		
Disposal/decontamination technology not meeting performance requirement.	M	Technologies selection criteria will include requirements for proven commercial application with clean track records, provision of adequate training and active supervision of the technology provider will mitigate this risk.
Poor handling and storage of PCB contaminated equipment representing an environmental and/or health hazard	M	The project will develop guidelines for the proper handling, packaging, storage and disposal of PCB containing equipment and wastes. Operators involved in this kind of operation will be properly trained before being asked to carry out such activities.
Natural disasters on stockpiles and POPs containing articles may cause spreading of PCBs in the environment Sri Lanka climate conditions will affect performance and efficiency of PCB treatment facilities or activities being carried out as part of the project .	M	Following UN procedures, new installation/facilities will undergo feasibility analysis and EIA, where the climate and seismic risk are identified and addressed. In general, facilities will not be erected in area subjected to flooding or classified as highly seismic. Design of facilities will be made in compliance with the classification of the area in term of seismic risk. The operational plan will take into account emergency response to be adopted in case of natural disasters. Project's activities such as PCB handling and transportation will be carried out according to prevailing climate conditions to reduce the potential for environmental accidental releases

A.7. Coordination with other relevant GEF financed initiatives

42. The project will seek coordination with the related Chemicals Management project being implemented in Sri Lanka. These include the SAICM project which aims to upgrade the chemical profile of country. A PCB management

project funded by the Government of Sri Lanka to dispose part of the identified PCB stock is being planned and budgeted.

43. Recently, the NIP review and update project with UNIDO as implementing agency has been submitted to GEF for approval. There is also an upcoming project on Smart Chemicals Management in the Sri Lankan Industrial Sector, which UNIDO will support, in cooperation with the Sri Lanka Cleaner Production Center.
44. The country also has a strong program on mercury management and the awareness raising component of this program will include POPs in general. The MMDE has identified eight focal areas to minimize use of Mercury in the country which include: preparation of mercury inventory in Sri Lanka; survey on extent of mercury use and its effect on gold jewelry makers; study on mercury levels of mercury in the human tissues; market survey of the ayurvedic and other beauty products containing mercury; trace metal analysis of human hair samples of selected population; survey of mercury containing thermometers used in schools and introduction of alcohol thermometers and; implementation of a pilot project on mercury management in hospitals.
45. Some NGOs in the country has also received funds under the Small Grant Programme of the GEF and has conducted several studies on health effects of PCBs and awareness raising activities. The project will hold consultative meetings with the NGOs to properly plan related awareness-raising activities.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

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

46. A detailed discussion of the institutions involved in the PCB issues of the country is presented under A.4 (ii). The following institutions have been identified as main stakeholders of the project: Ministry of Environment and Renewable Energy (MERE), now renamed as Ministry of Mahaweli Development and Environment (MMDE), and Ministry of Power and Energy (MPE) as national executing partners, Ceylon Electricity Board (CEB), Lanka Electricity Company (LECO), Lanka Transformers Limited (LTL), Central Environmental Authority (CEA). CEB, LECO and LTL can be considered as the three main agencies that deal directly with transformers and capacitors, which may be contaminated with PCBs. These institutions import and handle all transformers used by the state sector and by the power utilities in the country.
47. The Sri Lanka Department of Labour will be consulted on the issues of: Enforcement of Labour Standards; Monitoring of Occupational Safety and Health and Emergency Preparedness; and, Regulating employment as it relates to protection of working women in hazardous environments. Through the National Institute of Occupational Safety and Health (NIOSH), the labour authorities will be involved in terms of creating awareness among workers on the hazards at the workplace and ways by which they can be protected. The Ministry of Health will also be involved especially on health-related issues posed by PCB hand
48. It is the aim of the project, as it relates to environmentally-sound (and safe) management of PCB contaminated oil/ equipment/wastes, to reduce the risks posed to workers involved in transformer repair and maintenance, storage, transport, recycling and final disposal operations. Thus, it will also endeavour to engage technicians and workers on this area. The technical guidelines and/or regulations on handling PCB contaminated oil/equipment/wastes, which will be formulated through the project, will include chapters on safe handling operations compliant with national standards as prescribed by labour authorities. Workers of secondary users of oil, such as welding workshops, mostly belong to the “informal sector”, would benefit from the awareness campaigns which could be done together with NIOSH.
49. The importance of the full support of the Sri Lankan government and its respective relevant ministries cannot be overemphasized especially on the institutionalization of policy and legal framework that should address PCB Management in the country. The MMDE will be the national executing partner for the project and will coordinate and ensure the timely implementation of the project. The Central Environmental Authority shall ensure that policy framework is developed to address PCB issues in the country.
50. The commitment of private sector (PCB owners) to dispose of their stockpile in an environmentally sound manner is also very significant. The project will partner with private sector in investing in PCBs management plan implementation. Their corresponding co-financing contribution will be sought to deliver the needs and objectives of the project.
51. The project will also seek the participation of transformer service providers, relevant industry associations,

NGOs, women's organization, media and the academia in capacity building, PCB disposal plan and public awareness raising activities.

B.1.1 Institutional arrangement for project implementation:

- 52. The project implementation structure in Figure 1 below. 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 Regional Office in India and the UNIDO Focal Point in Sri Lanka will also play a significant role in the implementation and monitoring of the project. UNIDO country-level monitoring will be provided as part of the in-kind contribution of the organization to the project.
- 53. The Ministry of Mahweli Development and Environment (MMDE) (formerly Ministry of Environment and Renewable Energy) will be the main executing partner for the project. Co-executing agencies include the Ministry of Power and Energy, including all its affiliates and Central Environmental Authority.
- 54. A Project Management Unit (PMU) will be established within the Ministry. A National Project Director (NPD) from the MMDE will be appointed and would chair the Project Steering Committee. A National Project Coordinator (NPC), also from the Ministry, will be assigned by the NPD to oversee the activities of the project with the National Project Manager (NPM) who will be recruited to manage and execute the day-to-day tasks required by the project. International and national experts will be recruited based on project requirement.

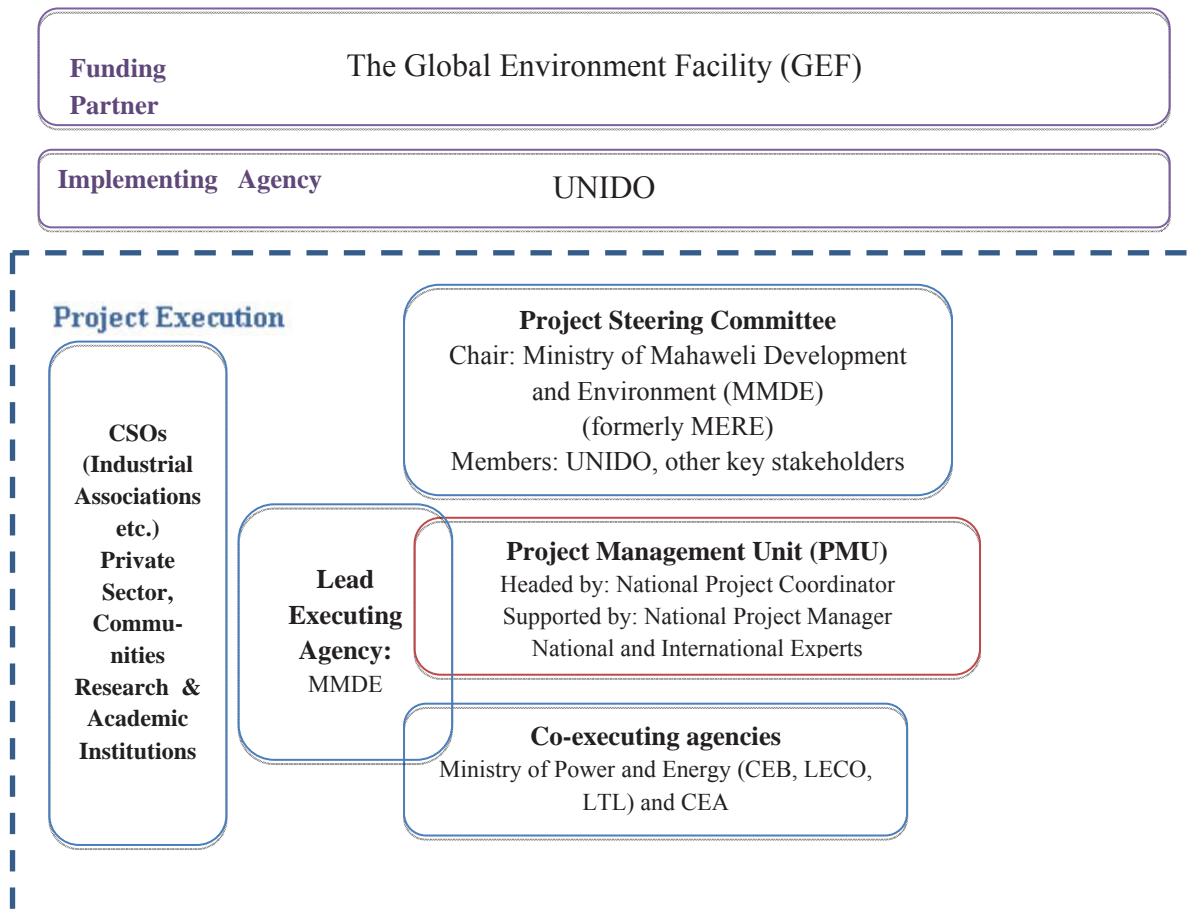


FIGURE 1 PROJECT IMPLEMENTATION STRUCTURE

- 55. A Project Steering Committee (PSC) will be established, chaired by the National Project Director from the MMDE and comprising of representatives from relevant ministries, UNIDO and other relevant stakeholders. The members

of the PSC will be finalized during the project inception phase. The PSC will hold its regular sessions at least once a year throughout the project implementation, but additional meetings can be held if necessary. A Technical Working Group (TWG) may also be formed to discuss technical issues that may arise during project implementation. The TORs of both PSC and TWG will be formulated and agreed during the project inception phase. The PSC and TWG should make necessary decisions within the rules and regulations of UNIDO and the GEF as per GEF C.39/inf3.

56. UNIDO will enter into contractual agreements with reputable institutions in the country to support the delivery of some project components. It is envisaged that the Industrial Technology Institute (ITI) will continue to assist UNIDO on the conduct of the inventory. For awareness raising activities, UNIDO may tap institutions that already have experiences in the delivery of PCB information dissemination programs to various stakeholders, including NGOs such as Center for Environmental Justice and People to People Volunteers.
- 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):
57. The project mainly deals with reduction of release of and exposure PCBs based on a full implementation of the Stockholm Convention on POPs. From the economic standpoint, the implementation of the Stockholm convention imply the internalization of environmental costs for PCB owners; this at the same time represents a benefit for the community and the country general economy due to reduced costs associated to chronic of fatal diseases.
58. The main beneficiaries of the project activities are the general public, consumers and communities which may be exposed to PCBs which may be released into the environment. Health risks for people will decrease once a proper legislation regulating environmental and goods quality is in place and enforced. The enforcement of environmental legislation will represent not only a benefit for the environment, but also a key development factor.
59. Social sustainability will be ensured by strengthening public participation and ensuring access to project outcomes to the general public. In particular, local communities, women and children will be involved in project activities to ensure that risks and problems associated with POPs will be properly addresses and mitigation strategies can be formulated. General public will also be informed about health and environmental risks related to PCBs and benefits from eliminating its production, use, storage, transport and disposal in an environmentally-sound manner.
60. The net economic benefit for the country is therefore the difference between the increased cost for the owner of PCB equipment and the reduced cost for the country and the population at large. For instance, it is well known that, despite the economic support they may receive from the implementation of GEF projects, for the electric sector the implementation of PCBs requirement set under the Stockholm convention is a net cost, as it imply the environmentally sound disposal or treatment of PCBs contaminated equipment and in some cases, the replacement of PCBs transformers with new transformers. In Sri Lanka, currently, old, phase-out transformers are auctioned by the electric sector, which therefore obtain an economical benefit without any obligation to dispose PCBs contaminated transformers: this means pure externalization of environmental costs related to PCBs. In other word, is the community which is currently bearing the cost of PCB environmental hazard.
61. The project intends not only to ensure the removal and destruction of around 1000 tons of PCBs and PCB containing equipment and waste with the associated global environmental benefit; it also intend to establish a system which will be used to ensure that scrap metal for recycling within the steel making cycle are free from PCBs. The process has the potential to ensure the quality of scrap metals beyond the specific issue of PCB contaminated transformers, with an evident economic benefit for the economy of steel scraps on both the side of professional consumer and recycling industry.
62. Gender dimensions are also a critical component to be considered during this PCB project. The Sri Lankan Government since 1990s has taken measures to eliminate all forms of discrimination against women and address the issues relevant to women. The country also has taken measures through legislation and actions to promote women's labour force participation. However, inequities and wage disparities still exists. Low level labour force participation for women may be attributable to cultural attitudes and fears prevailing among Sri Lankans to protect young girls/women from outsiders as well as due to inadequate facilities provided by the employers to protect women's rights and to prevent abuse (Report on Gender Mainstreaming for UNIDO/NCPC-Sri Lanka).

63. Recognizing that the level of exposure to PCBs 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 chemicals (e.g. in the household, agriculture, industry, school, etc.). Considering the realities of the industries concerned with PCB issues, exposure of the male population is a vital concern. Thus, a multi-stakeholder, gender-sensitive approach will help ensure the success and sustainability of project outputs.
64. Gender mainstreaming activities will be an integral part of this project. This will be addressed with due regard to UNIDO and the Government of Sri Lanka's gender policy, mainly by involving women and vulnerable groups at the sector level (e.g. Ministry of Health, Ministry of Agriculture, etc.), in the project coordination unit (PCU) and national steering committee, at the stakeholder level (e.g. by involving relevant women's group in the workshops, at the informational level (e.g. gathering POPs inventory data on current POPs management practices, on occupational health data, and consultation about potential and practical post-NIP interventions) and public awareness programs.

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

i) Cost-effectiveness

65. Cost effectiveness will be implemented at any stage of the project by adoption of proper procurement procedures for all the activities, including selection of services and equipment based on the best quality/cost ratio. For the most expensive project component (i.e. disposal services) testing of the disposal technology to verify compliance with SC requirements, reliability and use of resources will be a mandatory requirement for completing the procurement of the relevant technologies.
66. UNIDO has an outstanding experience in executing out projects related to the environmentally sound management of PCBs in many countries in the world; for this reason, it has established a wide base of information concerning the cost of PCBs related activities (inventory, sampling and analysis, storage, transportation, technology testing, technology procurement and or renting) which will serve as benchmark during procurement and monitoring activities.
67. The evaluation of technological alternatives will therefore be based not only on theoretical market cost, but will take into account local factors and constraint to ensure that the cost effectiveness is the highest among all the possible choices, and that at the same time the strategy adopted is the most sustainable. This will for instance affect the analytical and sampling strategy for the PCB inventory; the choice of locally available disposal technology, against alternatives like the importing of new technologies or exporting of contaminated materials, as well as the issuance of TOR with detailed and measurable indicators.

ii) Sustainability and Replicability

68. In line with the Stockholm Convention requirements and with the GEF strategic objectives on POPs, the project will build an environmentally-sound management (ESM) system for PCBs management in the country and promote the replication of ESM of other hazardous substances. A sustainable administration of the project will be achieved through strengthening of the institutional POPs management structure, making of the necessary policies and raising public awareness. High-level political involvement will be ensured through a dedicated project team who will consult with stakeholders and relevant authorities on project matters. This will also be beneficial for a timely project execution.
69. The sustainability of the project outputs will be ensured by the following:
 - i) Formulation and enforcement of the policies/guidelines to PCBs, PCB-containing equipment and waste management will ensure the sustainability of the regulatory environment. Proper dissemination of the guidelines and monitoring of the regulatory bodies will sustain adherence to the environmentally-sound handling of the PCB wastes and stockpiles.
 - ii) Mobilization of stakeholders at national and local levels becomes self-sustaining given the critical mass of project activities both at avoiding cross-contamination of PCB-free equipment with PCBs from PCB-containing equipment and from other PCB-containing equipment specific treatment activities. This would also ensure that the oil recycling industry is informed and monitored to ensure that PCB-contaminated oil is not reused.

- iii) The knowledge and experience gained through the application of the BAT/BEP requirements for handling, collection, packaging, interim storage, transport and disposal of PCBs, PCB-containing equipment and wastes will provide a solid base for introducing sustainable life-cycle management for a wide range of hazardous wastes.
 - iv) Strengthening public-private partnership through the utilization of locally-available disposal technology will ensure that global benefits are attained.
70. The financial sustainability of the project will be ensured by:
- i) With the provision of a transformer washing system, decontaminated transformer carcasses and decontaminated oil that contain less than 50 ppm PCBs will generate revenues to assure the operation and maintenance of treatment facilities;
 - ii) The emergence of industrial and service sectors dedicated to technical and technological support of BAT/BEP in PCBs waste management, transport, interim storage, treatment and disposal will generate economic activity and employment.
71. The project also offers potential replicability of its results in long-term that will be ensured by benefits, including but not limited to:
- i) BAT and BEP will be introduced in life-cycle management of other types of POPs wastes and hazardous wastes;
 - ii) Successfully introduced and demonstrated alternative technologies will be applied for disposal of other types of POPs and chemical wastes;
 - iii) Experience and lessons learned through this project will be applied for other PCB projects and whenever feasible and reasonable the lessons learned through this project will be applied globally in developing countries and countries with economies in transition.

C. DESCRIBE THE BUDGETED M&E PLAN:

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.

Type of M&E activity	Responsible Parties	GEF Budget USD*	Co-financing	Time frame
Regular monitoring and analysis of performance indicators	UNIDO PM, PMU, MMDE and M&E consultants as required	100,000	30,000	Regularly to feed into project management and Annual Project Review
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	50,000	20,000	Annually prior to the finalization of APR/PIR and to the definition of annual work plans
Mid-term Evaluation	PMU, MoE, external consultants, UNIDO PM, Steering Committee	30,000	10,000	Mid of project

Type of M&E activity	Responsible Parties	GEF Budget USD*	Co-financing	Time frame
Terminal Project Evaluation	PMU ,MoE, UNIDO PM and Project Steering Committee, independent external evaluators	50,000	10,000	Evaluation at least one month before the end of the project; report at the end of project implementation
Visits to field sites to monitor progress and assess delivery of services	UNIDO PM, PMU, MoE	70,000	30,000	Twice a year; as necessary for PMU
Total Indicative Cost		300,000	100,000	

Monitoring responsibilities and events

72. 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.
73. 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.
74. Targets and indicators will be reviewed annually as part of the internal evaluation and planning processes undertaken by the Project Management Unit (PMU)
75. UNIDO through meetings (face-to-face or through teleconferencing) with project counterparts as frequent as deemed necessary but not less than twice per year will undertake periodic monitoring of the project implementation progress. This will allow parties to troubleshoot any problems pertaining to the project in a timely fashion to ensure the smooth implementation of project activities. Meetings with counterparts may coincide with the field visits to the project sites.
76. 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. As part of the GEF Monitoring requirement, the NPM will also prepare a Progress Implementation Report (PIR), as per prescribed format. Part of this PIR is the reporting/updating of the co-financing committed and the UNIDO Stockholm Convention Unit indicators.

Key impact indicators for the project

77. As the primary objective of this project is to introduce in the country the system for PCB management and 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 the institutional capacities, the nation-wide database of contaminated equipment and wastes and metric tons of decontaminated dielectric oils in PCB-containing equipment and PCB-containing mineral oil and wastes.
78. The important indicator is the number 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.

79. The other relevant indicators (regulatory instrument adopted, and PCB identification and disposal facility established and permitted) provide insights not only on project impact, but also on the future sustainability of the project outcomes.

Key Impact Indicator	Baseline	Target (at Year 5)	Means of Verification	Frequency of verification	Location
Set of guidelines and regulatory instruments on the management of PCBs are prepared and adopted	General hazardous waste regulation that by default includes PCBs	One set of guidelines and regulations on management of PCBs adopted and being utilized	Copy of the guidelines being distributed amongst PCB users and copy of legal instrument (Decree, law)	Annually	PSC meetings
PCB Treatment facility built, commissioned, permitted and operational for the disposal of PCB containing equipment and wastes	0	1	Certificate of disposal for PCB wastes treated at the site, Site visits, testing reports, official permitting documents	Within the first 36 months of project implementation	Treatment facility site
Number of transformers being sampled and tested for PCB contamination, and registered in created database	Unknown (less than 200)	2,000 + 5%	Laboratory reports and inventory registry	Annually	Transformers owners sites
Amount of PCB-containing equipment and waste treated in PCB treatment facility	0	1000 metric tons	Hazardous waste manifested, PCB owners records, PCB Treatment facility certificate and records	Annually	PCB owners sites, PCB treatment facility, and interim storage sites

Independent Evaluations

80. 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.

Project Management Activities

Inception Phase

81. 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 the other related organizations in Sri Lanka, as appropriate. This will provide the platform to disseminate project objectives, general workplan and implementation structure to relevant stakeholders.
82. 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. 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.
83. 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. The Inception (Phase) Report will be drafted and circulated for comments and approval by project partners within one month from the meetings.

Project Monitoring Reporting

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

84. 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

85. 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.
86. 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.

87. 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.

Terminal Project Workshop

88. 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.

General Consideration

89. 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.

Prior Obligations and Prerequisites

90. GEF grant assistance will be provided subject to UNIDO being satisfied that obligations and pre-requisites listed below have been fulfilled or are likely to be fulfilled. When fulfillment of one or more of these prerequisites fails to materialize, UNIDO may, at its discretion, either suspend or terminate its assistance.
- Prior to project effectiveness, financing by co-financiers other than the GEF and UNIDO specified in the project document and the respective commitment letters is to be made available to the Project;
 - During project implementation, progress reports and Project Implementation Review (PIR) reports should be prepared as per monitoring plan of the project.

Legal Context

91. The Government of the Democratic Socialist Republic of Sri Lanka agrees to apply to the present project, *mutatis mutandis*, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed and entered into force on 20 March 1990.

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


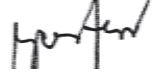
- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this form. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mr. BMUD Basnayake	Secretary	MINISTRY OF ENVIRONMENT AND RENEWABLE	02/13/2013

	GEF OFP	ENERGY	

B. GEF AGENCY(IES) CERTIFICATION

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

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Mr. Philippe R. Scholtès Managing Director Programme Development and Technical Cooperation Division UNIDO GEF Focal Point		02/24/2015	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 Development Objective: To build capacity to introduce and implement a polychlorinated biphenyl (PCB) management system to reduce and/or eliminate releases from PCB waste stockpiles and PCB-containing equipment in an environmentally sound manner.</p>	<p>Availability of a PCB regulation and national PCB phase out plan.</p> <p>Tons of PCB contaminated equipment disposed in an environmentally safe manner.</p> <p>Amount of incremental investment achieved.</p> <p>Increased Level of awareness and technical capability of institutional and private stakeholders</p>	<p>A regulation on PCB is missing.</p> <p>PCB equipment are not currently managed in compliance with Stockholm Convention.</p> <p>Co-financing is leveraged from relevant stakeholders at CEO Endorsement stage.</p> <p>Limited experience on the disposal of PCB contaminated equipment and oil by cement kiln incineration</p>	<p>A PCB regulation compliant with the SC convention is adopted and enforced.</p> <p>Committed cofinancing utilized for intended purpose.</p> <p>1000 t of PCB contaminated equipment disposed in an environmentally safe manner.</p>	<p>Project reports, interviews, certificate of analysis, proof of performance test report, certificate of disposal, survey of PCB management sites and activities.</p>	<p>Government of Sri Lanka is committed to issue and enforce a regulation on PCB.</p> <p>PCB owners are committed to environmentally sound management of their PCB equipment.</p> <p>Stocks of PCB contaminated equipment will be identified and secured for treatment / disposal.</p>
Component 1. Institutional strengthening and awareness raising					
<p><u>Outcome 1</u> Institutional capacities and stakeholders' awareness on PCB issues strengthened</p>	<p>Number of people (male/female) trained.</p> <p>Availability of an updated PCB inventory.</p> <p>Awareness on PCB issue measurably increased.</p>	<p>Limited awareness on PCB.</p>	<p>All the relevant stakeholders and the public are aware of the PCB issue.</p>	<p>Reports, official guidance, interviews-</p>	<p>MMDE and the main industrial stakeholders are committed to improve their awareness and capability on PCBs.</p>
<p><u>Output 1.1. Technical and human resources capacity for PCB management and disposal strengthened.</u></p>	<p>Number of staff (male/female) successfully trained</p> <p>Number of official guidance/policies on PCBs.</p> <p>Number of relevant stakeholders adopting best practices on PCB management.</p>	<p>Industry managers and technical staff lack awareness and knowledge on PCB issue with specific reference to cross –contamination.</p>	<p>Training of at least 30 staff from industry successfully completed.</p> <p>A PCB official guidance drafted in agreement with authority and main stakeholders.</p> <p>Communication and dissemination on the official guidance.</p>	<p>Training reports (pre and post training assessment reports, training materials). PCB management official guidance.</p>	<p>Institutional and industrial stakeholders are committed to attend training on PCB management.</p>

Hierarchy of Objectives	Indicators	Baseline	Target	Sources of Verification	Assumptions
Output 1.2 PCB inventory on the utility sector verified and completed;	No. of transformers sampled and analyzed Availability of a database with PCB transformers data linked to univocal code in PCB labels	Preliminary PCB inventory carried out in 2006, and reassessed in 2012 identified 2210 transformers manufactured before 1986, of which around 48% is considered PCB contaminated, based on results of a limited number (around 10%) of transformers tested. The contaminated transformers were not labelled therefore the updating of the inventory shall include identification and tracking. At least one laboratory (Lab of the Industrial Technology Institute) is available that has the technical capacity to perform the determination of dielectric oil in transformers.	Inventory design and sampling plan Sampling and analysis of at least 2000 transformers + 5% cross check Labeling, tracing and implementation of PCB traceability database	Inventory and sampling plan. Certificate of analysis for 2100 transformers (of which 5% cross-checked) Database linked to PCB transformer label univocal code.	There is enough analytical capacity for carrying out PCB analysis as required by the project. The contracting and upgrading of laboratory equipment and methodology can be carried out timely to ensure completion of the required analytical tasks. With the commitment of project partners, the completion of the countrywide inventory envisaging sampling and analysis of 2000 transformers can be carried out within the required timeframe.
Output 1.3 Stakeholder awareness and engagement including NGOs and civil society established	Number of people, institute, enterprises and communities trained and informed on PCB. Number of awareness raising workshops conducted considering a measurably increased awareness on PCB issues.	Awareness on the toxicological, environmental, technological and legal aspects related to PCB is very low in the country, at all level.	Awareness raising and training programs covering environmental, toxicology, technological and managerial aspects related to PCB implemented for general public, authorities, custom, research institutions, potential PCB owners and waste managers	Awareness raising material. Interviews / questionnaire with relevant stakeholder at midterm and at project completion.	Relevant stakeholders committed and interested in increasing their capacity and awareness on PCB technical and scientific aspects.
Component 2. Policy and regulatory framework.					
Outcome 2. Policy and	Number of environment	Currently, the only	Gap analysis of the	Gap analysis report,	Sri Lanka governmental

Hierarchy of Objectives	Indicators	Baseline	Target	Sources of Verification	Assumptions
<p><u>regulations relevant to PCBs formulated and enforced</u></p>	<p>policies/guidance documents adopted relevant to PCB management covering the full management cycle of PCB containing equipment, including inventory, operation, maintenance, decontamination, disposal compliant with Stockholm requirements on PCBs (Annex A, part II).</p>	<p>national regulation concerning PCBs is their inclusion in the waste legislation (schedule VIII). No legislation exists concerning the management of equipment containing PCBs (inventory, labeling, management plans, phase out and disposal) Sri Lanka however has submitted a NIP which includes PCBs as a priority.</p>	<p>existing legislation completed. Text of the framework regulations on PCBs drafted. Official guidance documents approved and demonstrated in the project. New PCB regulation approved by the Sri regulatory body of the Sri Lanka government.</p>	<p>meeting minutes, reports, copy of the officially adopted guidance, reports concerning the discussion on the draft regulation.</p>	<p>stakeholders are supportive in providing information on the best and fastest way to implement new regulation and guidance documents.</p>
<p><u>Output 2.1. Policy and regulatory framework developed and enforced for PCB management.</u></p>	<p>Number of instruments and guidance documents compliant with Stockholm requirements on PCBs (Annex A, part II) adopted. Availability of a practical strategy for implementing the new PCB regulation agreed with the stakeholders and implemented.</p>	<p>Currently, the only national regulation concerning PCBs is their inclusion in the waste legislation (schedule VIII). No legislation exists concerning the management of equipment containing PCBs (inventory, labeling, management plans, phase out and disposal)</p>	<p>A legislation on PCB drafted and adopted. An enforcement strategy which will clearly define the role and responsibilities of the local and central authority, deadline, incentive and penalties for the PCB owners, reporting and management obligation is drafted and agreed with relevant ministries and industry representatives</p>	<p>Meeting reports, draft of the legislation on PCB, official act related to the promulgation of the legislation, preliminary and final draft of the enforcement strategy.</p>	<p>Sri Lanka governmental stakeholders together with industry stakeholders are proactive in identifying proper mechanisms, specific for Sri Lanka, for the enforcement of the PCB legislation.</p>
<p>Component 3. Disposal of PCBs, PCB-containing equipment and wastes</p>					
<p><u>Outcome 3 Disposal of 1000 tons of PCBs, PCB-containing equipments and wastes</u></p>	<p>Tons of PCB handled and disposed of. Number of new businesses created Number of jobs created</p>	<p>Only the Holcim cement plant is currently available for PCB disposal. A functional system for the environmental sound management of PCB is lacking. Substantial risk of release of PCB in the environment as a result of</p>	<p>A functional system for the ESM management of PCB established. 1000 tons of PCB equipment disposed or treated. Risk of release of PCB in the environment significantly reduced.</p>	<p>Certificate of disposal / treatment of PCB contaminated material. Site surveys. Technology proof of performance test reports. Design of storage facilities. Supervision reports</p>	<p>A suitable technology will be available for treating at least 1000 t of PCB within project time span. The economic advantage of chemical treatment of PCB contaminated oil may represent a viable alternative to cement kiln incineration.</p>

Hierarchy of Objectives	Indicators	Baseline	Target	Sources of Verification	Assumptions
Output 3.1 <u>PCB waste collected, packaged, transported and stored.</u>	Tons of PCB waste and PCB containing equipment safeguarded..	mismangement and climate related risks. Currently, identification, transportation and storage of PCB equipment is not carried out in an environmentally sound way.	Guidance procedures for the packaging, temporary storage, transportation and disposal of PCBs in Sri Lanka put in place and verified. At least one temporary storage facility established or upgraded for the storage, packaging and transportation of PCBs	Guidance documents for the safe handling of PCBs. Reports and documentation concerning storage, packaging and transportation of PCBs. Supervision at PCB storage facility. Supervision reports.	Based on the experience of the project partners, a PCB guidance document can be prepared timely and effective to be adopted in project operations.
Output 3.2 <u>PCB wastes disposed and PCB containing equipment decontaminated based on selected technical option.</u>	Tons of PCBs equipment and waste successfully disposed Tons of equivalent CO ₂ prevented Tons of materials recycled or reused Commercial value of materials recycled and reuse	Currently, the only facility that can dispose PCB in Sri Lanka is the Holcim cement kiln, which can accept an equivalent of 5 kg pure PCB per hour maximum, due to constraints in chlorine input. Other options, including chemical dehalogenation, need to be explored	One or more suitable disposal or treatment facilities, compliant with the SC BA T/BEP criteria, for a capacity suitable to fulfill or exceed project needs, established, tested and permitted. At least 1000 tons of PCBs equipment or waste treated or disposed by means of such facility	Bidding documents and reports for disposal technology Proof of Performance test report of the PCB disposal facility	There may be enough economic and environmental benefit to demonstrate an additional technology in addition to cement kiln co-incineration.
Output 3.3. <u>Long-term strategy on PCB management developed (based on project results).</u>	Number of stakeholders with PCB management plans integrated into the national PCB management plan.	A long term national plan for PCB management, with special reference with cross PCB contaminated equipment is missing	A country national plan for the phase out or treatment of PCB contaminated equipment, including specific sub-plans for the largest industries (electric power companies and large electricity consumers) drafted, agreed among stakeholders and adopted.	National plan and sectorial (electric industry, large electricity consumers) plans for the phase out or treatment of contaminated equipment.	Enough experience is accumulated in the course of the project to draft an effective long term strategy on PCB

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).

A. Question from STAP (US) at PIF on June 2013 Work Program:

For project 5314 (Sri Lanka), given the potential risks faced by workers involved with this project, will the Sri Lankan labor ministry be involved/consulted?

The Sri Lanka Department of Labour will be consulted on the issues of: Enforcement of Labour Standards; Monitoring of Occupational Safety and Health and Emergency Preparedness; and, Regulating employment as it relates to protection of working women in hazardous environments. Through the National Institute of Occupational Safety and Health (NIOSH), the labour authorities will be involved in terms of creating awareness among workers on the hazards at the workplace and ways by which they can be protected.

It is the aim of the project, as it relates to environmentally-sound (and safe) management of PCB contaminated oil/equipment/wastes, to reduce the risks posed to workers involved in transformer repair and maintenance, storage, transport, recycling and final disposal operations. The technical guidelines and/or regulations on handling PCB contaminated oil/equipment/wastes, which will be facilitated/formulated through the project, will include chapters on safe handling operations compliant with national standards as prescribed by labour authorities. Workers of secondary users of oil, such as welding workshops, mostly belong to the "informal sector", would benefit from the awareness campaigns which could be done together with NIOSH.

B. Items to be addressed at the CEO Endorsement stage:

i) Detailed assessment of technologies for environmentally-sound disposal of PCBs.

The detailed assessment of technologies that maybe considered for Sri Lanka are detailed in **Annex L**. A summary is presented below:

The Stockholm Convention and Basel Convention requirements on PCB treatment and disposal.

The first criteria to be considered when selecting a technology, both at the procurement and testing stage, is whether the technology may suit the required cleanup or disposal targets. The Stockholm Convention does not set any specific target for cleanup or disposal technologies except what is indicated in Article 6.D.ii, that the levels of destruction and irreversible transformation should ensure non-POPs characteristics of the residues. The Stockholm Convention allows only "waste with low content of POPs" to be disposed without being destroyed (e.g. by landfilling), and, at article 6.2, it calls for coordination with the Basel Convention to "establish level of destruction and irreversible transformation" and "define the low persistent organic pollutant content". The updated Basel Guidance establishes for PCBs and PCDD/F, a "low POP" concentration value of respectively 50 mg/kg and 15 µg/kg. Different target may be however set at country level for the decontamination of PCBs contaminated equipment and waste.

Both The GEF STAP guidance document and the Basel Guidance mentioned above specified generally accepted levels of destruction efficiency and destruction removal efficiency (99.99 % and 99.9999% respectively) for direct destruction technologies applied to POPs stockpiles and waste. Another important requirement for POPs disposal technologies under the Stockholm Convention is that technologies should be "designed to prevent or to reduce releases of chemicals listed in Part I of Annex C (PCDD/F, HCP and PCB and their impact on the environment as a whole." In other words, destruction of PCBs must occur without the generation of PCDD/F and other U-POPs.

Criteria for technology selection

There are a number of criteria leading to the proper selection of a technology for the disposal of PCBs, among which some are "intrinsic", i.e. only related to the characteristic of the waste to be disposed or treated, and other are "site

specific", i.e. related to the availability of specialized personnel, utilities, infrastructures and chemicals in the country where the technology has to be installed.

On the side of "intrinsic" requirements, different technologies have to be selected, for both technical and economic reasons, based on the type of waste or equipment to be treated. The first criteria for selecting the proper technology is obviously the concentration of PCBs. As a rule of thumb, whilst PCBs equipment with a concentration of PCBs lower than some thousands ppm (5000-10000) may be effectively and economically treated with a number of non-combustion technologies (Figure 1), high concentration PCB oil or waste, like pure commercial PCBs (aroclor, clophen, apiolio etc.), or solid waste deriving from the dismantling of transformers filled with pure PCBs (wood, cardboard) need to be disposed of by means of thermal destruction technologies. Another important criteria for selecting the proper technology is the residual life of the equipment. Being transformers valuable piece of equipment, and considering the cost of new dielectric oil (in the order of 4 to 6 USD/kg) it is evident that the best option for relatively new, cross contaminated transformers is their decontamination below the SC limit (50 ppm) or other more stringent limit (down to 2 ppm in some countries). In this case, a good process envisages the destruction of PCBs content in the oil, the reprocessing of the oil to remove impurities and sludge, and the decontamination (by one or more cycle of refilling) of the porous material inside the transformers. There are basically two different number of process sequences which would allow this result:

- 1) continuous decontamination with A-PEG (Alkaline Polyethilen Glicole) reagents (Figure xx), which may be conducted without dismantling or draining the transformers;
- 2) draining of oil from transformers, batch treatment of PCBs contaminated oil with metallic sodium, refilling cycles with clean oil until stable decontamination of the transformer

End of life transformers are instead more economically treated by means draining PCB contaminated oil dismantling, separating contaminated materials (e.g. wood and cardboard) and cleaning of the metal scrap. This would basically create 3 streams of waste:

- 1) decontaminated scrap metal waste, to be recycled as scrap metal;
- 2) hazardous solid waste containing PCBs (wood and cardboard) to be incinerated or extracted by means of enhanced vacuum
- 3) contaminated oil, to be either thermally destroyed or decontaminated by means of chemical destruction technologies (A-PEG or metallic sodium) based on the PCB concentration.

The main technologies, commercially available, which will be considered in the course of project implementation for demonstration in Sri Lanka is provided in Annex I.

ii) Detailed information on sites for storage and disposal

Detailed information on the storage sites are presented under A.4 (i) para 14 and A.4 (ii) para 31. It is envisaged that an interim storage will be sourced out to safeguard PCB-containing transformers identified by the inventory. The interim storage site will be constructed using precautionary measures.

For PCB disposal, the inventory will determine the technology options that maybe applied. Comparison of different scenarios, cost-benefit analysis and studies of economic and market conditions will be undertaken to ascertain the most viable and applicable technology or mechanism that maybe introduced or utilized to address PCB management in the country. However, the presence of Holcim Cement Plant in the country, which has experience on co-processing disposal of PCBs, will be considered. The baseline project discussion for Component 3 details the disposal plan.

iii) Roles of stakeholders to address PCBs, PCB containing equipment and waste, including Public-Private Partnership.

The institutional framework in Sri Lanka relevant to the PCB issues is presented in A.4 I(ii) para 16-23 and B.1 para 46-51.

iv) Detailed strategy to sustain the outcomes and outputs of the GEF project

Sustainability of the project outputs is detailed on B.3 (ii) Sustainability and Replicability para 68-71.

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

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

PPG Grant Approved at PIF: USD 150,000			
<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>
Kick off Meeting with counterparts	5,000	4,800	200
Sampling and analysis of PCBs from decommissioned transformers in the LTL stock yard	50,000	50,000	0
Baseline scoping (visit to storage facilities and disposal facility; expert's mission)	25,000	21,700	4,300
Stakeholders' Workshop held to secure public and private sectors' commitment to the project	10,000	3,000	7,000
Development of the logical framework and project document	30,000	27,000	3,000
Provision of transport and interim storage for PCB-containing transformers	30,000		30,000
Total	150,000	106, 500	44,500

The PPG activities undertaken have resulted to the achievement of the objectives set in the project preparation phase. Concrete results were achieved through the studies undertaken by national experts on various baseline information required to complete the project document and the conduct of the experts' mission to visit various candidate sites in Armenia.

A kick-off meeting was held in August 2013 with various stakeholders and informing them of the GEF-funded projects and its objectives. Site visits were also conducted by UNIDO and MMDE to provide a deeper understanding of the existing infrastructure in the country. The workplan and timelines of the PPG phase were also discussed and agreed. Data requirements to complete the project document were also identified.

A stakeholders' meeting was held on 12 June 2014 with around 40 participants consisting of relevant stakeholders from government institutions, electrical utilities private sectors and NGOs involved in the PCB management issues. This event was organized to firm up the commitment of the stakeholders' on the co-financing requirement of the project. An expert mission was held back to back with the stakeholders' meeting to gather information on the gaps identified for the completion of the project document.

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.

OF EXPECTED REFLOWS (if non-grant instrument is used)

pected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

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
Component 4:	Impact monitoring and evaluation																			
Outcome 4:	Project management and M&E established																			
Output 4.1:	M&E mechanism designed and implemented																			
Activity 4.1.1:																				
Activity 4.1.2:																				
Activity 4.1.3:																				
Activity 4.1.4:																				
Activity 4.1.5:																				
Activity 4.1.6:																				
Activity 4.1.7:																				
Activity 4.1.8:																				
Activity 4.1.9:																				

ANNEX F: BUDGET TABLE FOR GEF GRANT

	GEF Outputs	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:	Technical and human resources capacity for PCB management and disposal strengthened	Consultants	\$32,000	3.0	\$7,000	0.5								\$39,000	3.5	
		Nat. Experts	\$24,000	7.0	\$6,000	1.5									\$30,000	8.5
		Sundries														
		Project staff travel	\$11,000		\$1,000										\$12,000	
		Equipment														
		Workshops														
		Subcontract	\$15,000		\$5,000									\$19,000		
		Subtotal	\$82,000	10.00	\$18,000	2.50								\$100,000	12.50	
Output 1.2:	PCB inventory on the utility sector verified and completed;	Consultants	\$25,000	2.5	\$20,000	2.0	\$10,000	1.0						\$55,000	5.0	
		Nat. Experts	\$22,000	6.5	\$5,000	1.5	\$3,000	1.0						\$30,000	8.5	
		Sundries														
		Project staff travel	\$10,000		\$7,000		\$4,000								\$21,000	
		Equipment														
		Workshops	\$7,000												\$7,000	
		Subcontract	\$66,000		\$119,000		\$62,000							\$247,000		
		Subtotal	\$129,000	8.50	\$152,000	3.50	\$79,000	2.00						\$360,000	13.50	
Output 1.3:	Stakeholder awareness and engagement including NGOs and civil society established	Consultants	\$3,000		\$7,000	0.5	\$7,000	0.5						\$17,000	1.5	
		Nat. Experts														
		Sundries			\$3,000		\$3,000							\$6,000		
		Project staff travel	\$3,000		\$7,000		\$7,000							\$17,000		
		Equipment												\$0		
		Workshops	\$7,000		\$10,000		\$10,000							\$26,000		
		Subcontract	\$1,000		\$12,000		\$12,000						\$24,000			
		Subtotal	\$13,000		\$38,000	0.50	\$38,000	0.50					\$90,000	1.50		
		Sub Total for Component 1	\$224,000	19.00	\$208,000	6.00	\$117,000	2.50					\$550,000	27.50		

Output	GEF Outputs	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:	Policy and regulatory framework developed and enforced for PCB management.	Consultants	\$19,000	2.0	\$22,000	2.0	\$4,000	0.5					\$45,000	4.0
		Nat. Experts	\$33,000	9.5	\$59,000	17.0	\$18,000	5.0					\$110,000	31.5
		Sundries	\$3,000		\$9,000		\$7,000						\$19,000	
		Project staff travel	\$7,000		\$6,000		\$2,000						\$15,000	
		Equipment												
		Workshops	\$8,000		\$8,000		\$6,000						\$21,000	
		Subcontracts	\$16,000		\$17,000		\$7,000						\$40,000	
		Subtotal	\$87,000	11.50	\$120,000	19.00	\$43,000	5.50						\$250,000
	Sub Total for Component 2			\$87,000	11.50	\$120,000	19.00	\$43,000	5.50			\$250,000	36.00	

Output	GEF Outputs	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 3.1:	PCB wastes collected, packaged, transported and safely stored;	Consultants	\$3,000	0.5			\$135,000	12.5					\$138,000	12.5
		Nat. Experts			\$17,000	5.0			\$154,000	44.5	\$38,000	11.0	\$209,000	60.5
		Sundries			\$10,000		\$12,000						\$22,000	
		Project staff travel	\$5,000		\$6,000		\$12,000						\$26,000	
		Equipment	\$17,000		\$16,000		\$7,000		\$3,000				\$44,000	
		Workshops	\$3,000		\$38,000		\$7,000		\$2,000				\$50,000	
		Subcontracts	\$3,000		\$7,000				\$2,000				\$12,000	
		Subtotal	\$31,000	0.50	\$94,000	5.00	\$173,000	12.50	\$163,000	44.50	\$38,000	11.00	\$500,000	73.00
Output 3.2:	PCB wastes disposed and PCB-containing equipment decontaminated based on selected technical option	Consultants	\$28,000	2.5	\$44,000	4.0	\$12,000	1.0	\$12,000	1.0	\$3,000	0.5	\$100,000	9.0
		Nat. Experts	\$33,000	9.5	\$17,000	5.0							\$50,000	14.5
		Sundries											\$0	
		Project staff travel	\$5,000		\$2,000		\$12,000		\$12,000		\$3,000		\$35,000	
		Equipment			\$70,000		\$418,000		\$418,000		\$104,000		\$1,010,000	
		Workshops												
		Subcontracts	\$10,000		\$135,000		\$660,000		\$660,000		\$165,000		\$1,630,000	
		Subtotal	\$75,000	12.00	\$268,000	9.00	\$1,103,000	1.00	\$1,103,000	1.00	\$276,000	0.50	\$2,825,000	23.50
Output 3.3:	Long-term strategy on PCB management developed (based on project results)	Consultants							\$13,000	1.0	\$17,000	1.5	\$30,000	3.0
		Nat. Experts							\$10,000	3.0	\$5,000	1.5	\$15,000	4.5
		Sundries							\$4,000		\$11,000		\$15,000	
		Project staff travel							\$3,000		\$2,000		\$5,000	
		Equipment												
		Workshops												
		Subcontracts							\$4,000		\$1,000		\$5,000	
		Subtotal						\$34,000	4.00	\$41,000	3.00	\$75,000	7.00	
	Sub Total for Component 3		\$106,000	12.50	\$363,000	14.00	\$1,276,000	13.50	\$1,300,000	49.50	\$355,000	14.50	\$3,400,000	104.00

GEF Outputs	Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
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Output	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m		
M&E mechanism designed and implemented	Consultants	\$30,000	3.0	\$36,000	3.5	\$6,000	0.5	\$6,000	0.5	\$6,000	0.5	\$53,000	5.0	\$130,000	12.0	
	Nat. Experts	\$35,000	10.0	\$15,000	4.5	\$5,000	1.5	\$5,000	1.5	\$33,000	9.5	\$93,000	27.0			
	Sundries	\$2,000												\$4,000		
	Project staff travel	\$9,000		\$1,000		\$1,000		\$1,000		\$1,000		\$13,000				
	Equipment															
	Workshops	\$11,000		\$1,000		\$1,000		\$1,000		\$1,000		\$15,000				
	Subcontracts	\$45,000										\$45,000				
	Subtotal	\$132,000	13.00	\$54,000	7.50	\$14,000	2.00	\$14,000	2.00	\$14,000	2.00	\$88,000	14.50	\$300,000	39.00	
	Sub Total for Component 4	\$132,000	13.00	\$54,000	7.50	\$14,000	2.00	\$14,000	2.00	\$14,000	2.00	\$88,000	14.50	\$300,000	39.00	
	Project total	\$549,000	55.50	\$744,000	46.50	\$1,450,000	23.50	\$1,313,000	51.50	\$443,000	28.50	\$4,500,000	206.00			
Project management cost	Consultants	\$6,000	0.5	\$6,000	0.5	\$6,000	0.5	\$6,000	0.5	\$5,000	0.5	\$30,000	3.0			
	Nat. Experts	\$32,000	9.0	\$32,000	9.0	\$32,000	9.0	\$32,000	9.0	\$24,000	7.0	\$150,000	43.5			
	Sundries															
	Project staff travel															
	Equipment	\$9,000		\$9,000		\$9,000		\$9,000		\$7,000		\$45,000				
	Workshops															
	Subcontracts															
	Subtotal	\$47,000	9.50	\$47,000	9.50	\$47,000	9.50	\$47,000	9.50	\$36,000	7.50	\$225,000	46.00			
	TOTAL with PMC	\$596,000	65.00	\$792,000	56.50	\$1,498,000	33.50	\$1,361,000	61.50	\$478,000	36.00	\$4,725,000	252.00			

*NOTE: BUDGET COMPONENTS PER OUTPUT MAYBE REALIGNED FOR CONTRACTUAL ARRANGEMENTS

Output	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	US\$	w/m	
M&E mechanism designed and implemented	Consultants	\$30,000	3.0	\$36,000	3.5	\$6,000	0.5	\$6,000	0.5	\$6,000	0.5	\$53,000	5.0	\$130,000	12.0
	Nat. Experts	\$35,000	10.0	\$15,000	4.5	\$5,000	1.5	\$5,000	1.5	\$33,000	9.5	\$93,000	27.0		
	Sundries	\$2,000											\$4,000		
	Project staff travel	\$9,000		\$1,000		\$1,000		\$1,000		\$1,000		\$13,000			
	Equipment														
	Workshops	\$11,000		\$1,000		\$1,000		\$1,000		\$1,000		\$15,000			
	Subcontracts	\$45,000										\$45,000			
	Subtotal	\$132,000	13.00	\$54,000	7.50	\$14,000	2.00	\$14,000	2.00	\$88,000	14.50	\$300,000	39.00		
	Sub Total for Component 4	\$132,000	13.00	\$54,000	7.50	\$14,000	2.00	\$14,000	2.00	\$88,000	14.50	\$300,000	39.00		
	Project total	\$549,000	55.50	\$744,000	46.50	\$1,450,000	23.50	\$1,313,000	51.50	\$443,000	28.50	\$4,500,000	206.00		
Project management cost	Consultants	\$6,000	0.5	\$6,000	0.5	\$6,000	0.5	\$6,000	0.5	\$5,000	0.5	\$30,000	3.0		
	Nat. Experts	\$32,000	9.0	\$32,000	9.0	\$32,000	9.0	\$32,000	9.0	\$24,000	7.0	\$150,000	43.5		
	Sundries														
	Project staff travel														
	Equipment	\$9,000		\$9,000		\$9,000		\$9,000		\$7,000		\$45,000			
	Workshops														
	Subcontracts														
	Subtotal	\$47,000	9.50	\$47,000	9.50	\$47,000	9.50	\$47,000	9.50	\$36,000	7.50	\$225,000	46.00		
	TOTAL with PMC	\$596,000	65.00	\$792,000	56.50	\$1,498,000	33.50	\$1,361,000	61.50	\$478,000	36.00	\$4,725,000	252.00		

*NOTE: BUDGET COMPONENTS PER OUTPUT MAYBE REALIGNED FOR CONTRACTUAL ARRANGEMENTS

ANNEX G: SUMMARY OF FUND DISTRIBUTION: GEF GRANT AND COFINANCING

ACTIVITIES		GEF	COFI	Sum GEF+COF
Component 1.:	Institutional strengthening and awareness raising	550,000	2,000,000	2,550,000
Outcome 1.:	Institutional capacities and stakeholders' awareness on PCB issues strengthened			
Output 1.1:	Technical and human resources capacity for PCB management and disposal strengthened	<i>100,000</i>	<i>350,000</i>	<i>450,000</i>
Activity 1.1.1:	Develop guidelines for the ESM of PCBs adapted to local needs and conditions in both English and local languages	30,000	190,000	220,000
Activity 1.1.2:	Conduct technical training for officers from relevant institutions on the environmentally sound management of PCB containing equipment (identification, storage, transport, disposal)+F4	40,000	80,000	120,000
Activity 1.1.3:	Publication and dissemination of the guidelines.	30,000	80,000	110,000
Output 1.2:	PCB inventory on the utility sector verified and completed	<i>360,000</i>	<i>1,210,000</i>	<i>1,570,000</i>
Activity 1.2.1:	Prepare inventory design and sampling plan	50,000	40,000	90,000
Activity 1.2.2:	Sampling and analysis of at least 2000 transformers + 5% cross check	240,000	970,000	1,210,000
Activity 1.2.3:	Labelling, tracing and implementation of PCB traceability database	70,000	200,000	270,000
Output 1.3:	Stakeholder awareness and engagement (including NGOs and civil society) established	<i>90,000</i>	<i>440,000</i>	<i>530,000</i>
Activity 1.3.1:	Preparation and dissemination of awareness raising material	10,000	40,000	50,000
Activity 1.3.2:	Conduct awareness raising programmes on POPs for the general public focusing on women and children issues	30,000	120,000	150,000
Activity 1.3.3:	Conduct awareness raising programme for the environmental authorities, customs and research institutions	30,000	80,000	110,000
Activity 1.3.4:	Conduct awareness raising programme for central and provincial power generation and distribution sector and for waste managers	20,000	200,000	220,000
Component 2.:	Policy and regulatory framework	250,000	1,000,000	1,250,000
Outcome 2.:	Policy and regulations relevant to PCBs formulated and enforced			
Output 2.1:	Policy and regulatory framework developed and enforced for PCB management.	<i>250,000</i>	<i>1,000,000</i>	<i>1,250,000</i>
Activity 2.1.1:	Analysis of the gaps and barrier of the existing regulation	40,000	160,000	200,000
Activity 2.1.2:	Drafting and adoption of a specific PCB regulation; amendment of norms on waste management, environmental quality as necessary under the National Environmental Act.	120,000	480,000	600,000
Activity 2.1.3:	Development of a practical strategy for PCB regulation implementation and enforcement.	90,000	360,000	450,000
Component 3.:	Disposal of PCBs, PCB-containing equipment and wastes	3,400,000	14,589,752	17,989,751
Outcome 3.:	ESM system for 1000 tons of PCBs established			
Output 3.1:	PCB wastes collected packaged, transported and stored.	<i>500,000</i>	<i>6,050,000</i>	<i>6,550,000</i>
Activity 3.1.1:	Collection and packaging of PCBs equipment for storage and transportation.	100,000	4,050,000	4,150,000
Activity 3.1.2:	PCB contaminated equipment safely transported and	400,000	2,000,000	2,400,000

	stored to the interim storage facility			
Output 3.2:	PCB wastes disposed and PCB containing equipment decontaminated based on selected technology option	2,825,000	8,359,752	11,184,751
Activity 3.2.1:	Conduct a feasibility analysis of commercially available technologies (cement kiln, chemical dehalogenation)	60,000	100,000	160,000
Activity 3.2.2:	Selection and procurement of PCB disposal technology / services	100,000	2,259,752	2,359,751
Activity 3.2.3:	Disposal of 1000 t of PCBs and PCB containing equipment	2,665,000	6,000,000	8,665,000
Output 3.3:	Long-term strategy on PCB management developed	75,000	180,000	255,000
Activity 3.3.1:	Prepare financial and technical analysis of the disposal activity	20,000	40,000	60,000
Activity 3.3.2:	Draft long term strategy for PCB management.	30,000	70,000	100,000
Activity 3.3.3:	Hold final workshop for long term strategy introduction and approval	25,000	70,000	95,000
Component 4.:	Impact monitoring and evaluation	300,000	500,000	800,000
Outcome 4.:	Project management and M&E established			
Output 4.1:	M&E mechanism designed and implemented s	300,000	500,000	800,000
Activity 4.1.1:	Establish the project management team	30,000	60,000	90,000
Activity 4.1.2:	Establish the Project Steering Committee and hold inception meeting	30,000	40,000	70,000
Activity 4.1.3:	Measure impact indicators on an annual basis	20,000	50,000	70,000
Activity 4.1.4:	Prepare Annual Project Implementation Reports and Workplans.	20,000	50,000	70,000
Activity 4.1.5:	Hold annual Project Steering Committee meetings	20,000	60,000	80,000
Activity 4.1.6:	Carry out mid-term external evaluation	40,000	50,000	90,000
Activity 4.1.7:	Carry out final external evaluation	40,000	50,000	90,000
Activity 4.1.8:	Complete the Terminal Report	40,000	60,000	100,000
Activity 4.1.9:	Establish a project management information system (MIS).	60,000	80,000	140,000
	Project management cost	225,000	900,000	725,000
		4725000	18,989,752	23,714,752

The following annexes are provided as separate files:

ANNEX H: Report on the study of exposure to polychlorinated biphenyls (PCBs) and its health effects among welders in the Kalatura and Badulla districts

ANNEX I : Photo documentation of the visit to LECO site

ANNEX J : Inventory Data on the decommissioned transformers at the LTL yard scheduled for scrapping

ANNEX K: Assessment report on current situation of implementation of the Basel, Rotterdam and Stockholm Convention in Sri Lanka

ANNEX L: Technologies for PCBs treatment and disposal suitable for Sri Lanka.