



# PROJECT IDENTIFICATION FORM (PIF) <sup>1</sup>

PROJECT TYPE: Medium-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

## PART I: PROJECT IDENTIFICATION

Project Title:	Environmentally Sound Management of PCBs		
Country(ies):	The Kingdom of Cambodia	GEF Project ID: <sup>2</sup>	4390
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	XX/CMB/08/X01
Other Executing Partner(s):	Ministry of Environment	Submission Date:	14 April 2011
GEF Focal Area (s):	Persistent Organic Pollutants	Project Duration (Months)	36 months
Name of parent program (if applicable): ➤ For SFM/REDD+ <input type="checkbox"/>		Agency Fee (\$):	95,000

### A. FOCAL AREA STRATEGY FRAMEWORK<sup>3</sup>:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
(select) CHEM-1	Outcome 1.4	Output 1.4.1	GEFTF	890,000	1,645,000
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)	Others		(select)		
Sub-Total				890,000	1,645,000
Project Management Cost <sup>4</sup>			GEFTF	<b>60,000</b>	255,000
<b>Total Project Cost</b>				950,000	1,900,000

### B. PROJECT FRAMEWORK

<b>Project Objective: To update the PCB inventory, particularly in provinces outside of Phnom Penh, and establish environmentally sound management (ESM) system of PCBs in transformers, other contaminated equipments and wastes. To demonstrate the final PCB disposal mechanism.</b>						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
1. Environmentally sound management system of PCBs.	TA	Key Stakeholders will be able to deal with PCB issues in an environmentally sound way as part of their regular business as usual activities	1.1. PCBs legislations drafted and institutional capacities of relevant ministries developed  1.2 Transformer maintenance database established including concentrations of PCBs at the maintenance facility by	GEFTF	190,000	750,000

<sup>1</sup> It is very important to consult the PIF preparation guidelines when completing this template.

<sup>2</sup> Project ID number will be assigned by GEFSEC.

<sup>3</sup> Refer to the reference attached on the [Focal Area Results Framework](#) when filling up the table in item A.

<sup>4</sup> GEF will finance management cost that is solely linked to GEF financing of the project.

			<p>engaging PCB test kits</p> <p>1.3. Assessment of socio - economic aspect for phase-out of PCBs made</p> <p>1.4. Laboratory capacities strengthened for updating PCB inventory</p> <p>1.5. Training for workers provided to properly manage PCB contaminated transformer oils and awareness raising for the public who use the transformer oil for domestic purposes</p>			
2. Final disposal mechanism and demonstration of the ESM system	TA	Power sectors, PCB owners, and other stakeholders will be equipped with final disposal mechanism demonstrated through this project and the country will be in compliance with the Stockholm Convention requirements	<p>2.1. PCB interim storage established</p> <p>2.2. PCB assessment methodology established as business as usual actions of transformer maintenance facilities for both in-use and phased out transformers</p> <p>2.3. Demonstration of final disposal of 300 tons of PCB-contaminated equipment</p>	GEFTF	700,000	895,000
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
			Sub-Total		890,000	1,645,000
			Project Management Cost <sup>5</sup>	GEFTF	60,000	255,000
			<b>Total Project Costs</b>		950,000	1,900,000

**C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)**

Sources of Cofinancing	Name of Cofinancier	Type of Cofinancing	Amount (\$)
National Government	Ministry of Environment	In-kind	45,000
National Government	Ministry of Industry, Mines and Energy	In-kind	45,000
GEF Agency	UNIDO	In-kind	40,000
Private Sector	Electricité du Cambodge	Grant	270,000
Private Sector	Electricité du Cambodge	In-kind	1,500,000
(select)		(select)	

<sup>5</sup> Same as footnote #3.

(select)		(select)	
<b>Total Cofinancing</b>			1,900,000

**D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY<sup>1</sup>**

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

<sup>1</sup> In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table

<sup>2</sup> Please indicate fees related to this project.

## **PART II: PROJECT JUSTIFICATION**

### **A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:**

#### A.1.1 the [GEF focal area/LDCF/SCCF](#) strategies:

The project is consistent with Objective 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 of the POPs Focal Area of draft Chemicals Strategy for GEF-5 (a) phasing out PCB-containing electrical equipment from use and (b) disposal of PCBs in an environmentally sound manner so that environmental and health related risks resulting from PCB exposure will be reduced.

#### A.1.2. For projects funded from LDCF/SCCF: the LDCF/SCCF eligibility criteria and priorities:

#### A.2. national strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

The NIP has established the preliminary inventories of POPs chemicals, identified technical, regulatory and institutional barriers to SC implementation, and developed a series of national strategies and action plans through intensive consultations among national stakeholders. The NIP identified PCBs as one of the most important priority areas, so that swift action is needed to ensure PCB in existing electrical equipments will not be dispersed to the environment at the end of the current waste management stream. The “Law on Environmental Protection and Natural Resources Management” was adopted by the National Assembly on 24 December 1996. The main purpose of this law is to protect environmental quality from chemicals’ pollution and other hazardous wastes through inventory and through their environmentally sound management. This law also focuses on the sustainable management of natural resources in order to promote the socio-economic development of the country. Laws and regulations addressing PCBs, such as setting industrial liquid discharge limits, have been put in place. Relevant national strategies and action plans address the management of chemicals as a crucial area. The government has initiated discussions on developing a comprehensive legislation addressing chemicals, which could be boosted by the proposed project.

### **B. PROJECT OVERVIEW:**

#### B.1. Describe the baseline project and the problem that it seeks to address:

The Kingdom of Cambodia signed the Stockholm Convention (SC) on Persistent Organic Pollutants (POPs) on 23rd May 2001 and ratified it on 25th August 2006. The Government of Cambodia is now mandated as Parties to establish the environmentally sound management of Polychlorinated Biphenyls (PCBs). The National Implementation Plan (NIP) identified the following weaknesses: (a) Cambodia has not yet adopted its PCBs-related obligations; (b) there is a lack of capacity to solve the disposal of PCBs in an environmentally sound manner; (c) the laboratory capacities for PCBs-analysis using PCB test kits do not exist, and thus proper enforcement even if the necessary legislations were in place could not be achieved; (d) transformers are poorly managed, and there is no mechanism to avoid cross-contamination of PCB-free equipment; (e) PCBs contaminated waste and oils are not properly stored and disposed of, and therefore emitted to the local and global environment; (f) there is a lack of awareness on PCBs especially among the workers who engage in transformer maintenance; (g) working safety measures are lacking and finally (h) the socio-economic implications of the PCBs obligations of the SC are unknown.

The power grids of the country have been extended with new electrical equipments since around 1997 when the World Bank, Asian Development Bank, and other bilateral agencies have commenced their assistance to the power sector in Cambodia. While some parts of the country’s power grids are now maintained by foreign companies through build-own-operate-transfer (BOOT) arrangements, the only transformer maintenance facility of Electricité du Cambodge (EDC), that is the largest power sector operator of the country, now annually accepts about 10 transformers produced before 1997 out of about 80 transformers that are received from all over the country and repaired at the facility. Transformers older than 1997 are sold for reuse to provinces out of Phnom Penh, and there have been no efforts to establish the environmentally sound management (ESM) system of PCBs in those older transformers in provinces.

There are certain activities for capacity development for environmental management in general and POPs in particular, for example, with SAICM QSP and bilateral assistance for academic and governmental institutes. For example, an on-going UNEP’s SAICM project “*Cambodia/UNEP partnership on development of a coherent legal and institutional framework in Cambodia for the sound management of chemicals.*” is to develop a coherent and economic sustainable legal and institutional structure for the sound management of chemical in the country. This

proposed project will further build PCB specific legal frameworks on the general sound chemical management framework being established by the UNEP project. However, the UNEP project does not have an PCB-specific ESM component targeting both the private and public sectors. To address these issues, the project will have two components. The capacity building component of the project will create capacity for implementing the PCBs-related obligations of the SC. Its outputs are as follows: Output 1.1: necessary regulatory and institutional enabling environment as per Articles 3 and 6 and Annex A Part II of the SC including an ESM system is put in place for the management of PCBs; Output 1.2: PCBs database is established and available for reporting; Output 1.3: social costs of meeting the PCB-related obligations of the SC are assessed, and the most suitable mitigation measures are found; Output 1.4: laboratory capacity is available for enforcement; Output 1.5: public will be discouraged to use transformer oils for domestic purposes through awareness campaigns. Another component of the project will have Output 2.1: set up PCB interim storages for transformer oil identified as possibly PCB contaminated; Output 2.2: extend the current operational flow at a transformer maintenance facility to create a separate operational flow for PCB contaminated equipments; and Output 2.3: demonstrate final disposal mechanism for PCB-contaminated equipments suitable for the level and amount of the PCB-contaminated equipments identified in the updated PCB inventory.

- B. 2. [incremental /Additional cost reasoning](#): describe the incremental (GEF Trust Fund) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF financing and the associated [global environmental benefits](#) (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

Without GEF's support, PCBs in existing older transformers will keep being dispersed to the environment as they have been most likely, while the power grids of the country are further extended without very limited interventions made to PCBs in older transformers particularly in provinces outside of Phnom Penh. The legislations addressing PCBs would not be available and the central authorities would not have the necessary capacity to implement the PCBs-related obligations of the SC. The analytical capacity for PCBs inventories would not be well developed. Without proper legislation enforcement could not be effectively put in place and owners of electrical equipment would not be forced to undertake inventories of PCBs and to implement proper management of such equipment. According to the NIP, due to unsound management practices approximately 16 tonnes of oil would continue to be potentially contaminated with PCBs thus approximately 60 pieces of transformers would be cross-contaminated annually. Current practices of selling approximately 400 litres per annum of potentially contaminated oil for domestic purposes would continue to exist. GEF's absence would further prevent the sound disposal of 300 tonnes of PCB-containing equipment (both in phased out stored in EDC's warehouse in Phnom Penh and old ones in use outside of Phnom Penh). This lack of addressing the existing PCBs would continuously pose a risk for human health and the global environment. With GEF's assistance, the fundamental instruments for effective PCBs management will be created with EDC's co-financing activities which would help the project activities incorporated into EDC's business-as-usual activities as a sustainable output of the project. By making a full country inventory, PCB-contaminated equipment will be labelled and a mechanism will be established for regular check-ups carried out in the equipment maintenance facility. Workers at the maintenance facility will be less exposed to PCBs due to proper working environment, safety gears and training. PCBs will not be released during storage due to improved conditions and reduced stockpiles. Through demonstrating final disposal of the PCBs in phased-out transformers, the risks of PCB releases will be eliminated and capacity created for replication.

- B.3. 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) or adaptation benefits (LDCF/SCCF). As a background information, read [Mainstreaming Gender at the GEF.](#):

The establishment of ESM of PCBs will help improve morals and ethical standards among industrial sectors and the public with regard to how to deal with environmental pollutants in their daily operations and life. Such social norms reinforced during this project period could spill over to other socioeconomic aspects of the industrial operations and people's behaviors. Promoting UNIDO's policy on gender equality and the empowerment of women, the strategy to encourage engagement of female workers in the stakeholder industrial sectors, although a large portion of employees could be male workers in the power sector, will be discussed with the Government of Cambodia and monitored as an indicator during the project implementation phase.

B.4 Indicate risks, including climate change risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the project design:

Risk	Risk Mitigation Measures
Increase transportation and disposal costs due to oil price increase	By reducing the quantity of the waste at source, the exporting amount for final disposal, and therefore the transportation cost, will be reduced.
Confirmation for the necessary co-financing will not be achieved	During the PPG phase, EDC's in-kind and cash contribution will carefully be assessed. World Bank and other bilateral agencies, which have assisted the country to extend the power grids have been contacted for this project development efforts and also issues related to older transformers used in provinces. Workshops and meetings will be held for private owners of PCB-containing equipment and various donor agencies to raise the outstanding funds. If the necessary co-finances could not be assured, project budget and objectives will be reconsidered.
Delay in project implementation and low quality performance	While involving both Ministries of Environment as well as Industry, Mining and Energy (MIME), EDC will also be involved from the project design stages to ensure the organization will be on board right from the initial phase of the project. Carefully selected success indicators and the adaptive monitoring practice will enable timely implementation and high quality results.
Lack of cooperation from key industrial stakeholders and PCB owners such as other power sector operators than EDC	Key stakeholders and PCB owners will be invited to workshops and also given incentives to release phase out transformers during the project phase. PCB legislations will be drafted involving the key stakeholders including Electricity Authority of Cambodia (EAC), which is an independent regulating body for overseeing the electricity power services, granting the right and obligation and penalizing, if necessary, the supplier and consumer of electricity in relation to electricity generation and supply facilities. Technical staff from the key stakeholders and PCB owners will be requested to join the PCB inventory team to expedite the inventory process as well as final disposal phase.
Lack of alternative for local consumers of used transformer oil for domestic purposes	Public awareness raising events should target such segments of the public who are currently buying used transformer oil for their small businesses
The initiation of this project gets delayed and cannot meet the needs of the other collaborating power grid extension projects.	Other multilateral and bilateral agencies will be kept informed of the project approval status. Once the project starts, it should provide PCB oil tanks in a secured storage, which could store all identified PCB oil until the final disposal will be done by this project.
More PCBs than the project can treat within the project resources will be identified.	The final disposal mechanism will be demonstrated by treating 300 tons of the PCB contaminated equipment, while the final disposal mechanism should be operated sustainably by the transformer maintenance facilities. Bilateral agencies will be kept

	informed of the project status as well as the PCB inventories, and in case that more PCBs are identified than expected, those bilateral agencies will be contacted for further assistance to the Government of Cambodia.
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**B.5. Identify key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:**

In addition to the Ministry of Industry, Mining and Energy (MIME), as the major player in the power sector of Cambodia, the Electricité du Cambodge (EDC) in Phnom Penh will be the operating entity of the ESM that needs to be designated by the Government of Cambodia. The Electricity Authority of Cambodia (EAC) will be involved in drafting PCB legislations to ensure PCB issues will be addressed in the electrical equipment maintenance and replacement by domestic power sector operators. The Ministry of Environment, academic institutes and NGOs will be invited to form a project steering committee. The gender ratio will be taken into account in the member selection of the committee.

**B.6. Outline the coordination with other related initiatives:**

The Australian Agency for International Development (AusAID) with World Bank is now initiating projects to lay out the power grid in the province of Svey Rieng that is at the border with Vietnam for the project amount of USD 5.3 million. This project will provide PCB test kit trainings to the project members of the AusAID/World Bank projects to ensure older transformers in the province will be checked for PCBs when the power grid project will replace the existing equipments. EDC had several projects aiming at improving the electrical network, to promote renewable resources, and to reduce losses. The projects were implemented by the World Bank and the Asian Development Bank (ADB). PCBs were addressed in the Provincial Power Supply Project by ADB, which ended in 2004. However, currently, there are neither PCB checking done nor labeling policy adopted for older transformers in the EDC's transformer maintenance facility. Project management is committed to liaise with future projects in the same field to avoid duplication of efforts and to facilitate the cost-effective use of global and bilateral resources.

**C. DESCRIBE THE GEF AGENCY'S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:**

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 areas of GEF, In particular, UNIDO has implemented environmentally sound management of PCBs in Asia and other regions, and has accumulated a great amount of GEF project experiences. UNIDO also now has more than three major projects on-going in Cambodia in the field of environmental protection and trade capacities, and synergy-seeking efforts will be made in-house to make sure UNIDO's resources will be also efficiently and effectively made available to the country.

**C.1 Indicate the co-financing amount the GEF agency is bringing to the project:**

The total amount of USD 40,000 will be offered as in-kind contribution of UNIDO during 36 months.

**C.2 How does the project fit into the GEF agency's program (reflected in documents such as UNDAF, CAS, etc.) and staff capacity in the country to follow up project implementation:**

UNIDO currently supports capacity building and technical transfer in the area of (i) Energy & Environment, (ii) Trade, and (iii) Poverty Reduction. UNIDO has projects in Cambodia ranging from chemical management to energy efficiency improvement which are supported by the UNIDO's local office. Therefore this project matches the UNIDO's thematic program areas and the implementation will be well supported by its local staff.

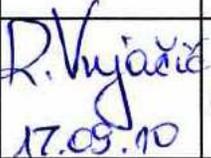
**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

**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 template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Dr. Lonh Heal	National Focal Point to GEF, Director General Council of Ministers	MINISTRY OF ENVIRONMENT, KINGDOM OF CAMBODIA	09/17/2010

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

**This request has been prepared in accordance with GEF/LDCF/SCCF policies and procedures and meets the GEF/LDCF/SCCF criteria for project identification and preparation.**

Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Mr. Dmitri Piskounov Managing Director UNIDO GEF Focal Point	 17.09.10	09/17/2010	Mr. Mohamed Eisa 	+43-1-26026 4261	M.Eisa@unido.org