



PROJECT IDENTIFICATION FORM (PIF)¹

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

PART I: PROJECT IDENTIFICATION

Project Title:	Environmentally Sound Management and Final Disposal of Polychlorinated Biphenyls (PCBs)		
Country(ies):	Ukraine	GEF Project ID: ²	4386
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	xx/UKR/080/X02
Other Executing Partner(s):	Ministry of Ecology and Natural Resources (MENR)	Submission Date:	2012-07-11
GEF Focal Area (s):	Persistent Organic Pollutants	Project Duration (Months)	48
Name of parent program (if applicable): ➤ For SFM/REDD+ <input type="checkbox"/>		Agency Fee (\$):	525,000

A. FOCAL AREA STRATEGY FRAMEWORK³:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
(select) CHEM-1	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	GEFTF	5,000,000	20,000,000
(select) (select)			(select)		
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(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)	Others		(select)		
Sub-Total				5,000,000	20,000,000
Project Management Cost ⁴			GEFTF	250,000	1,000,000
Total Project Cost				5,250,000	21,000,000

B. PROJECT FRAMEWORK

Project Objective: The proposed project will establish an environmentally sound management (ESM) system for PCBs, improve compliance to PCBs related obligations under the Stockholm Convention (SC) and promote local use of non-combustion technologies in the disposal of all PCBs identified during the preliminary inventory of the National Implementation Plan (NIP).						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
1. Institutional, regulatory and human capacity building for PCB management	TA	Strengthening of legal framework and institutional capacities for efficient PCB management and	1.1 PCB-related legislation including technical guidelines updated and in place; 1.2 Staff of government	GEFTF	300,000	1,000,000

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

² Project ID number will be assigned by GEFSEC.

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

⁴ GEF will finance management cost that is solely linked to GEF financing of the project. PMC should be charged proportionately to focal areas based on focal area project grant amount.

		disposal	<p>agencies, customs, NGOs and PCB owners trained to implement the regulation;</p> <p>1.3 Methods for PCBs analysis adopted and 3-4 laboratories accredited for PCB analysis;</p> <p>1.4 ESM system for the use and disposal of PCBs including related occupational safety measures implemented and published in a guideline;</p> <p>1.5 Operating procedures and trainings for enforcement authorities to carry out inspections related to the ESM system standardized;</p> <p>1.6 Emergency response measures developed and in place for transformer fires and leakages at the Ministry of Emergencies of Ukraine</p>			
2. Defining priority measures based on reliable in-depth inventory and national management plan for PCBs	TA	Establishment of in-depth inventory of the major owners of contaminated equipment and development of the national management plan for PCB disposal	<p>2.1 At least 10,000 PCB analysis conducted and organized in a database as an instrument for PCB phase out and disposal planning;</p> <p>2.2 Inspected equipment labelled and prioritized for decontamination or disposal;</p> <p>2.3 Current management practices for electrical equipment identified and documented;</p> <p>2.4 PCBs phase out and disposal plans developed;</p> <p>2.5 Potentially contaminated sites identified and recorded</p>	GEFTF	1,400,000	5,800,000

3. Environmentally sound management system (ESM) and disposal of PCBs including technology transfer and implementation	Inv	Demonstration of ESM and disposal of PCBs by decontamination and extension of life cycle of some operational equipment, recycling of mineral oil and secondary metals to enable reduction / elimination of PCB releases into the environment	3.1 Demonstration technologies selected and procured for the decontamination of PCB-contaminated oil; 3.2 BAT technologies for pre-treatment of PCB-containing wastes selected; 3.3 Technology options for the disposal of high concentration PCBs oils and other PCB wastes selected and implemented; 3.4 3,000 tonnes of PCBs oil, PCB-containing equipment and wastes disposed of; 3.5 Training and awareness raising for relevant stakeholders and PCB owners on ESM system and occupational safety undertaken at country level.	GEFTF	3,000,000	12,700,000	
4. Impact monitoring and evaluation	TA	Adherence to project document and attainment of project objective	4.1 Baseline indicators assessed; 4.2 Project impact monitoring system, evaluation of the achieved results and introduction of corrections if required; 4.3 Dissemination of project related information and results to local stakeholders	GEFTF	300,000	500,000	
	(select)			(select)			
	(select)			(select)			
	(select)			(select)			
	(select)			(select)			
	(select)			(select)			
	(select)			(select)			
Sub-Total						5,000,000	20,000,000
Project Management Cost ⁵				GEFTF	250,000	1,000,000	
Total Project Costs						5,250,000	21,000,000

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 Ecology and Natural Resources	In-kind	1,500,000
National Government	Ministry of Ecology and Natural Resources	Grant	350,000
GEF Agency	UNIDO	Grant	50,000
GEF Agency	UNIDO	In-kind	50,000

⁵ Same as footnote #3.

Others	Public and private sectors stakeholders (utilities, metallurgy, mining, rubber and plastic, food processing companies and hazardous waste management enterprises)	Grant	5,000,000
Others	Public and private sectors stakeholders (utilities, metallurgy, mining, rubber and plastic, food processing companies and hazardous waste management enterprises)	In-kind	14,050,000
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
Total Cofinancing			21,000,000

D. GEF/LDCF/SCCF/NPIF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	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)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(select)(select)	(select)				0
(select)	(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

² 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 /[NPIF](#) Initiative:

1. The proposed project is consistent with GEF 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”.

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

N/A

A.1.3 For projects funded from NPIF, relevant eligibility criteria and priorities of the Fund:

N/A

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.:

2. The Government of Ukraine has ratified the Stockholm Convention, developed its National Implementation Plan (NIP), which is awaiting submission to the Stockholm Convention Secretariat and identified PCBs as the most important priority area for action. The following priority areas in the POPs management including PCBs have been identified in the NIP as follows: (i) the necessity to develop and implement new regulatory measures for the management of POPs; (ii) the inventory, sound management and disposal of PCBs and PCB-containing electrical equipment; (iii) upgrading the current laboratory capacity to international standards in POPs analysis; and (raising public awareness related to the health and environmental impacts of POPs).
3. The proposed project will address the three objectives of the NIP, namely: (i) management of PCBs stocks; (ii) identification of economical and environmentally sound disposal options for PCBs; and (iii) public education and awareness. These issues require immediate attention due to the large inventory figures of PCBs.
4. Ukraine is also a party to Basel Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal, hence the proposed project is consistent and in line with global environmental policies and political commitments of the country.

B. PROJECT OVERVIEW:

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

Baseline scenario

5. PCBs have never been synthesized and PCB-containing equipment has not been manufactured in Ukraine. The synthetic PCBs, transformers, capacitors and other equipment in and outside the power sector were produced in Russia, Kazakhstan and Armenia or imported from Poland or Czechslovakia.
6. The inventory exercise undertaken during the NIP development provided general and preliminary information on the locations and owners of PCBs and PCB-containing equipment and wastes and is lacking any data on the equipment contaminated during services or maintenance. The information collected has been done through desk studies from name plates of electrical equipment and records at the time of the commissioning of the equipment.
7. According to the preliminary inventory, a total amount of 4,240 tonnes of PCBs from 1,002 transformers of 27 different models and from 102,032 capacitors of 157 different models have been identified. Additionally, 250 tonnes of PCB waste liquids have been recorded as stored in different owners. However, the total amount of PCBs reported in the NIP could be much higher as per the following table:

Type of equipment	Number (piece)	Weight of PCBs (ton)	Total weight (ton)
Transformers	1,500-3,000	3,000-6,000	8,300-16,600
Capacitors	150,000-200,000	2,850-3,800	9,000-12,000
PCB wastes		400-600	

8. The NIP also assessed the annual PCBs leakages from operating equipment. In the case of transformers, it was estimated at 0.06 kg/ton and for capacitors 0.8 kg/ton, thus annually approximately 180-360 kg PCBs from transformers and approximately 2,280-3,040 kg PCBs from capacitors enter the environment.
9. The NIP also provided detailed information on the available POPs disposal options including several local initiatives for

the treatment of highly chlorinated wastes. Due to the high amount of obsolete pesticides in the country, the Government strongly supported local research and development of new technologies for their treatment. One private initiative financed the development of a continuous type molten salt dechlorination plant with 100kg/hour capacity. The development of the plasma arc technology for hazardous wastes disposal with a capacity of 100kg/hour has been financed from the state budget. As the pressure of the local communities increases to solve the accumulated hazardous waste problem, the political decision gave priority to export treatment and these promising initiatives are awaiting commercialization.

10. Ukraine has a single facility in the waste industry, the enterprise Elga Co. Ltd. in Shostka, Sumy oblast that destructs obsolete banned pesticides and PCB-contaminated oil. The disposal is performed with pyrolysis with catalytic after-burning of exhaust gases and gas purification system. The PCBs oil disposal reported in 2002 was 50.8 tonnes per year and in 2010 the disposal costs was reported at US\$ 2,250 per tonne. Shostka Institute of Sumy State University (SISSU) cooperates with Elga Co. Ltd., Shostka in measurement of physical and chemical composition of organochlorine compounds and heavy metals in the slag, which come from recycling and waste obtained after their destruction. In fact, SISSU provided R&D support in improving the pyrolysis technology for disposal of PCB wastes and other organochlorine compounds.
11. The Ministry of Ecology and Natural Resources (MENR), formerly the Ministry of Environment, is responsible for environment related inspections. The current list of operations for an environmental inspector does not include the need to check for PCBs, therefore, no regular inspections for PCBs are undertaken, thus compliance on this regard will remain low.
12. There are a number of active NGOs in the field of POPs such as MAMA-86 (national IPEN coordinator in Ukraine since 2004 and was established after the Chernobyl accident), All-Ukrainian Ecological League and the Journalists' organization Western Ukrainian Charity Foundation for Ecological and Tourism Education and Information (WETI). MAMA 86 is the largest NGO and has a countrywide programme for hazardous waste and the network of operation in different regions of the country. MAMA 86 has expertise in conducting educational programmes on mercury and asbestos.

Baseline project

13. As part of the baseline project, the Government will develop the legal framework in adopting the PCB related obligations of the SC. Without the appropriate regulatory framework, enterprises will continue to manage PCBs and PCB-containing equipment and wastes in an unsound manner. PCBs will continue to be released into the environment and additional number of transformers will be cross-contaminated. This would worsen the inventory figures and increase the total cost of PCB phase out and disposal. Further, the Government will set up a national register of enterprises that own PCB-containing equipment including the location of the stockpiles of PCB-containing equipment and wastes. It also includes the development of an electronic database for the national register and its maintenance.
14. The Ecological Inspection under MENR has an environmental laboratory and the Government intends to strengthen the laboratory particularly in the field of CO₂ emission analysis. This and other Governmental laboratories lack the appropriate technical and human resources for PCB analysis. The Government will allocate resources for upgrading laboratories for PCB analysis and this will be done solely for enforcement reasons, entailing the adoption/development of an official PCB analytical method. Accreditation of the laboratories would however be missing. There are no standards and approved requirements for private laboratories on how to analyse PCB-containing materials, therefore, they may not provide PCB-related analytical services. The Ecological Academy would provide basic training of the trainers on PCB related measures and their incorporation in the regular work of inspectors. This will permit the enforcement authorities to check the compliance with the requirements of the regulatory measures. With this fundamental milestone, PCB-related enforcement would be established, however no regular inspections for PCBs are planned, thus compliance in this regard will remain low.
15. According to the NIP, 72% of the identified PCBs in the country are located at the most power consuming industries such as metallurgy, engineering, mining, rubber and plastic and food sectors. The share of the energy sector in the total amount of PCBs included in the NIP is insignificant. From experience, it is assumed that this sector owns the largest amount of PCB-contaminated equipment and therefore should receive broader attention than it has in the NIP and its action plans. The preliminary inventory should be extended to other sectors not covered by the NIP such as electrical, commercial and transport sectors. The critical points such as cross-contamination, potentially contaminated sites or excess occupational risks probably would still be missed. These inventories will be conducted by the PCB owners and would largely lack chemical analysis. Based on the updated inventory data a country-wide PCB phase out plan would be developed. This plan however would rely on incoherent data, particularly because the amount of cross-contaminated equipment would not be known. This will hide some of the PCB problems and will postpone important tasks till the

future.

16. The Government, as a general regulator, does not provide detailed technical guidance to the PCB-owners how PCB-containing equipment should be managed in an environmentally sound manner. The baseline project would concentrate in the first run on remediating the most pressing problems, such as leaking equipment and PCB wastes stored open-air as these create public concerns. The lack of a technically competent ESM system for PCBs will prolong exposure of workers and local communities living close to PCB-containing equipment.
17. The Government plans to remove all hazardous waste stockpiles in the country and according to the NIP, an estimated amount of US\$ 30 to 50 million have been included in the state budget for destructing all PCBs wastes in the country including all online transformers and capacitors as well as all PCB-containing equipment and waste oil that stored at stockpiles. The baseline project would favour export treatment of the PCB wastes, as it is a quick and publicly well-accepted solution and the Government could facilitate it through relevant administrative measures. This however, is not a cost-effective option for the whole PCB problem. The average cost of disposal would remain in the range of US\$5-6/kg, which would not allow for gradual increase in the pace of phase-out and disposal jeopardizing of Ukraine meeting the SC deadline for PCB phase-out and elimination. Taking into account that at Elga Co.Ltd. the actual disposal costs are US\$ 2,250 per tonne, the use of this facility and establishing a similar facility in the country are obviously more cost-effective options than the export.
18. The private sector would probably take the waste from the owners and export them abroad. Limited investments will be in research and development in order to reduce the cost of PCB disposal. These initiatives would however concentrate on local pre-processing and would lack international environmental standards. Without the GEF project the commercialization of promising local initiatives would remain slow. This would negatively influence the cost reduction in PCB disposal, which is generally achieved with local disposal technologies, and thus the pace of phase-out and disposal would be steady and slow.
19. Local hazardous waste management companies are interested in establishing their own disposal technologies to cover the local market of hazardous wastes. These companies generally have the financial capitals but lack the technical expertise in selecting the technologies and running them cost-effectively. Generally, the hazardous waste management sector is weak and lacks the technical and human resources expertise to operate according to international standards.
20. Local environmental NGOs would design their own programmes on POPs, which would concentrate on the hazards of POPs, but would lack the vision of the way forward. They would continue to sensitise local communities probably against the use of POPs but would leave the PCB owner sectors untapped. Without the GEF project these NGOs would continue to work parallel to the Government but their programmes would lack coherent coordination with the ongoing/planned Government initiatives. PCB-related awareness programmes of these NGOs would continue to be marginal and small-scale.
21. Industrial associations such as the Ukrainian Association of Ferrous Metallurgy Enterprises are important source of business and environmental related information for their members. These NGOs have live cooperation and strong influence on the industrial sectors. Currently they do not have any information and programmes on PCBs, which - knowing the accumulated amounts- is a ticking time-bomb. In the baseline project these NGOs would address the PCB problem and would probably advice their members to undertake detailed inventories and to develop PCB phase-out plans. The inventory process however would follow the methodologies of the NIP, which included only "paper" inventory and the express analysis of limited volumes of equipment and oil and thus would be inaccurate. Consequently the implementation of PCB management practices and phase-out plans would not be comprehensive.
22. In addition to the above, UNIDO will be opening its National Cleaner Production Center (NCPC) in Ukraine in September 2012 and will participate in the proposed project. Consequently, co-financing arrangement will be formally agreed during the PPG phase.

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

23. With GEF intervention, the Government of Ukraine will be able to carefully investigate all potential options for efficient regulation and management of PCB including the timely phase out and disposal in a cost-efficient and environmentally sound manner.
24. The executing agency in consultation with the private sector and NGOs will develop a comprehensive ESM system for PCBs. It will include (a) brief explanation of the PCB-related obligations; (b) guidelines for PCB identification and

analysis, including official analytical methods and accreditation system for PCB testing labs; (c) labelling instructions for PCB-containing equipment; (d) guidelines for PCB-related reporting obligations; (e) management of PCB-containing equipment; (f) guidelines for planning for a gradual PCB phase-out; (g) PCB-related risk assessment and management; (h) proposal for in-house staff training on PCBs; (i) record keeping options; and (j) information on local PCB treatment option. The system will assist the PCB owners and the regulatory authorities to have the clear working environment and responsibility sharing. It will allow the safe operation of PCB-containing equipment and their gradual phase-out at a much lower cost than without the project. Enterprises will have more advanced information for the preparation of the phase-out and disposal of PCBs. The details of the ESM system for PCBs will be compiled in the administrative and technical guidelines, which will be provided to inspectors, PCB owners and NGOs active in the field of environment. The decontamination of PCB-containing equipment and destruction of PCB-containing wastes are the third amount the priority actions that were implemented until recently in line with the National Implementation Plan of the Stockholm Convention.

25. The Government of Ukraine has budgeted the development of the national register for PCB-containing equipment items and wastes. It will contribute in preparing the full PCBs inventory and labeling of PCB-containing equipment in line with the Stockholm Convention requirements and promoting the creation of the technological base for decontamination of PCB-containing equipment and solid waste and destruction of PCBs wastes. These initial budgetary figures of approx.US\$5 mln (equivalent) seem to be reasonable taking into the fact they will be increased (as foreseen by the NIP) up to US\$ 30 to 50 million for destructing all PCBs wastes in the country including all online transformers and capacitors as well as all PCB-containing equipment and waste oil that are stored at stockpiles. The relevant legislation for PCBs management is being prepared and will be promulgated as soon as the NIP is formally approved by the Government. The government expenditures that were put in the state budget were US\$ 55,560 equivalent local currency.
26. The project scenario will include the development of standard operating procedures (SOP) on PCB-related inspection practices for the concerned enforcement authorities. The targeted PCB related enforcement programme and training will also be undertaken to guarantee adherence to the PCB-related legislations and the replicability of the SOP.
27. The technology introduction phase of the project requires strong private sector involvement and information sharing particularly on their management practices of oil-containing electrical equipment. The private sector will benefit from the technical assistance of the project in adopting the ESM system for PCBs and developing their PCB-phase-out plans. Project scenario will document all potentially contaminated locations to further enhance the PCB inventory.
28. The proposed project targets the disposal of 3,000 tonnes of PCBs, PCB-containing equipment and wastes, where 1,000 tonnes is high concentrated PCB-oil, 400 tonnes of PCB contaminated oil, 100 tonnes of porous materials including wood, paper and other wastes and the decontamination of 1,500 tonnes of empty carcasses. The recovered and decontaminated metal parts will be sold as scrap. The primary focus of disposal will be the destruction of PCBs and PCB-contaminated oils and wastes stored in drums and containers. The second priority will be given to contaminated transformers, especially the leaking ones and the next focus will be given to capacitors.
29. Two demonstration sites will be selected and each will be upgraded with different technologies for (a) decontamination of PCB contaminated oils, (b) pretreatment of waste PCB-containing electricity equipment, and (c) disposal of PCBs and PCB wastes. The first demonstration site will be oriented towards the commercialization of local BATs, while the other would invite well established vendors in supplying these technologies.
30. This will allow seeing the feasibility of operation of emerging and well established technologies in the Ukrainian context. It will support the wide distribution of BATs to interested investors, who will be able to use the practical experience to establish a similar technology at different regions of the country.
31. The disposal cost of 3,000 tonnes of PCB-contained equipment and wastes would be approximately US\$15.0 million. The measures foreseen by the proposed project such as pre-processing of PCB wastes, local decontamination and disposal of PCB wastes and recycling the metals from the carcasses of the equipment as scrap will reduce the disposal costs to US\$ 6.0-7.0 million or even lower. The reduced disposal costs will attract private sector investments in local PCBs waste management technologies. It is expected that these investments will be done during the implementation of the proposed project.
32. The GEF through UNIDO is expected to finance the feasibility studies, assessments, trainings and technical support for selection, upgrade evaluation and transfer of the demonstration technologies including the introduction of international working and occupational standards. The co-financing will mostly address the site development/upgrade, scaling up of local technologies and the cost of disposal. The ESM system, once in place, will create the market for affordable disposal services and thus will assure project feasibility and sustainability. Lower disposal prices are expected to increase the pace of PCB phase-out and disposal.
33. In 2003 there was a serious PCB transformer explosion in the country and the fire brigade did not have appropriate

emergency response measures in place, particularly for PCB-containing equipment. Appropriate procedures for such situations are yet to be developed. The proposed project will assist in developing the emergency response measures for the Ministry of Emergencies of Ukraine for fires of oil containing equipment. This will allow to reduce releases of PCBs and reduced health risks in case of emergency situations.

34. All of the above measures will lead to the reduction of PCBs releases into the environment as well as improved living and working environment for local communities and workers.
- 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/NPIF) or adaptation benefits (LDCF/SCCF). As a background information, read [Mainstreaming Gender at the GEF.](#)"
35. The most important socioeconomic benefits of the proposed project will be the reduced amount of PCB releases in the environment and consequently the reduction of human exposures.
36. The main reason behind the decision of the Government to remove all hazardous waste stockpiles in the country is high public concern. The proposed project is in line with this movement and creates an enabling environment for local communities to learn and follow the PCB disposal actions. In several cases, communities blocked the relocation of hazardous wastes within the country due to environmental and health concerns. The inclusion of environmental NGOs in the demonstration activities and the use of mobile technologies, which can be moved close to the wastes sites, are expected to reduce the environmental and health risks and will assure the support of the local communities.
37. The project will create an enabling environment for local communities to participate in the project, such as selection of priority actions and demonstration areas, selection and approval of technologies for local use and subsequent stages of project implementation.
38. The economically and environmentally efficient management of PCB wastes at the national and local levels will contribute towards the mitigation of global environmental problems. In particular the prevention of PCB leakages will reduce its amount available for local and transboundary movements. This will create a greener, cleaner and healthier environment to live on. As part of the ESM system, the occupational safety measures will be strengthened at the stakeholders and will have the positive impact on their working environment.
39. The project also foresees the creation of new working places at Government institutions, laboratories, waste management enterprises, industrial and environmental NGOs. These human resource development initiatives are open for all genders and would encourage the participation of women.
40. The proposed project will ensure collection of adequate data that will enable continuous monitoring of socioeconomic impacts by all stakeholders involved including NGOs and local communities. The local communities will have the information to participate in the decision making process.
- 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:

RISKS	RISK LEVEL	MITIGATION MEASURES
Lack of national support in the enactment of proposed PCB-related legislations and EMS system.	Low	The Ministry of Environmental Protection of Ukraine is the initiator of the proposed project and will ensure the active participation of all key stakeholders as full and equal partners. Local NGOs and civil societies will actively participate at all stages of the project implementation including the development of the proposed legislations, guidelines and technical documents. It will create understanding and strong support in the development and timely adoption of the ESM system.
Private PCB owners will not report their PCB-containing and PCB	Low	The new legislation framework will require the reporting of PCBs and authorizes the concerned government institutions for on-site inspections. Private enterprises will be informed about their obligations under the law through series of training

contaminated equipment.		workshops. The ESM system for disposal and treatment of PCB wastes and potential recovery of valued metals and mineral oil to be developed will demonstrate to PCB owners and to the business community, the economic efficiency of undertaking such projects. It will highlight the economic gains through regeneration of contaminated oil, recovery of secondary metals and extending the operating life of some transformers. Likewise, it will help to overcome the reluctance of PCB owners to cooperate with the project. The Government will have the institutional capacity to make the reporting obligatory and to facilitate the implementation of the PCB-related regulation.
Delays in project implementation and weak coordination.	Low	Carefully selected national institutions specialized in PCB management, project personnel, success indicators and adaptive monitoring practice will enable timely implementation. UNIDO, as a GEF agency responsible for the project, will use the experience accumulated through other similar projects to facilitate accelerated and efficient implementation of the project.
Technical staff, which can have direct contact with PCB-contaminated equipment, will be excessively exposed to PCB.	Low	The technical staff will have training in proper handling of PCB wastes and equipment. Relevant guidelines will be developed, installed, adjusted and introduced at the technical facilities of the proposed project and for the transportation teams. Protective gears and equipment will be provided to the technical staff. Places for PCB wastes storage will be properly guarded to prevent admittance of non-authorized staff. These measures will minimize the risk.
Excessive contamination of the environment during transportation/handling of the PCB-contaminated equipment. There is a danger that some wastes could be disposed illegally at unauthorized places, thus increasing the pollution of the environment and creating new "hot spot".	Medium	The in-depth inventory will record volumes, weights and other conditions of PCB-contaminated equipment and wastes. The Government will have institutional capacity to facilitate the implementation of the PCB-related regulation. The cooperation of NGOs and local communities (through awareness programmes) will be sought to identify such cases when they happen. So the possibility for irresponsible PCB owners to be fined for illegal disposal of wastes will be high and will not justify this risk. The project management team and the environmental authorities will be able to follow through the disposal paths of the PCBs-containing equipment and wastes using GPS trucks until safely disposed of. Transport to the dismantling facilities will be done following the requirements for safe handling of PCB wastes as mentioned in the Basel Convention guidelines.
Climate change risks	Low	No climate change related risk. The transformer oils will not be incinerated but mostly disposed through pyrolysis or recycled. Thus, formation of greenhouse gases will be avoided.

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:

41. The **Ministry of Ecology and Natural Resources (MENR)**, formerly the Ministry of Environment, will be the lead national counterpart of the project. The Ministry will be involved in developing/modification of the PCB-related regulation to make it compatible with the requirements of the SC on POPs. It will be responsible for establishing the requirements and stimulus for national industries to implement the Convention compliance measures, for the in-depth inventory of PCB-contaminated equipment as well as for capacity building for PCB management. The Ecological Academy of MENR will provide training to enforcement authorities and NGOs on ESM and occupational safety issues.
42. The **Ministry of Fuel and Energy (MoFE)** will participate in developing technical standards and administrative guidelines and procedures for PCB-contaminated equipment. The **Ministry of Health (MoH)** will monitor the influence of the existing and new technologies on the health of workers at companies of PCB-containing equipment and wastes as well as the health of the population of the country. Representatives from both ministries will be included in the Project Steering Committee.
43. The **Project Steering Committee (PSC)** will be established by the MENR and will include all key stakeholders from the Government, PCB owners, NGOs and UNIDO.
44. The project technical team will function under the guidance of the PSC. During the life of the project, the team will serve as a base for all PCB related activities such as task groups for legislation updating and technical guidelines development, inventory, labelling and database compilation, assessment and selection of technologies and other ad-hoc groups will be formed as required. Upon completion of the project, it is expected that the regulations adjusted to the requirements of the SC and the database of PCB contaminated equipment, which is necessary to plan, coordinate and monitor the long-term PCB disposal actions will be established. Enforcement and monitoring activities will be transferred to relevant departments of the Ministry of Environment and other environment monitoring agencies. The updated/improved regulations will impose obligation for PCB owners to eliminate their wastes resulting to market creation. The procured technologies will continue to operate on self-sustainable basis and will be available to all PCB owners at the cost recovering basis.
45. The technical stakeholders of the project are the utilities, metallurgical, mining, engineering, rubber and plastic and food processing enterprises, which are the main owners of PCB-contaminated equipment. The companies will be assisted in selection and adaptation of the BAT/BEP for treatment of their PCB wastes and implementation of the capacity building and technical measures, like training, new technical guidelines, pollution prevention and occupational safety measures.
46. The private sector will be encouraged to participate in the project with pilot demonstration activities. These enterprises will be the key stakeholders in implementing ESM system and implementing the selected PCB management and disposal technologies.
47. The proposed project aims to involve NGOs specialized on metallurgical, engineering, electrical and food processing industries (e.g. the Association of Ferrous Metallurgy Enterprises). These NGOs will be an important advisers in selecting project participating entities, demonstration sites and for bringing project related information to the attention of PCB owners. Environmental NGOs, such as MAMA-86 or All-Ukrainian Ecological League will be invited to participate in the development of the ESM system and in awareness raising activities. The involvement of environmental NGOs in the proposed project will permit to find better common solutions for the existing problems and through this to overcome the existing (mostly non-technical) barriers easier and quicker than might be expected in the baseline scenario.

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

48. During the preparation of the NIP, the different government implementing agencies have worked in coordinated and collaborative manner and have met on a regular basis. Similar coordination activities have been mapped out for the proposed project. The MENR is the main agency responsible for the country's compliance to the Stockholm Convention on POPs, and therefore, implementation of the proposed project. MOEP also coordinates activities under the Basel and Rotterdam Conventions. This helps ensure that there is no duplication in project activities relative to the implementation of these conventions with that of the Stockholm Convention. As part of the proposed project, a PSC will be established comprising of representatives from all stakeholders to guarantee a good coordination among different governmental, public and private organizations as well as NGOs. Project management is committed to work with appropriate international experts on activities addressing technical services not available at UNIDO.

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

49. UNIDO has developed and implemented similar GEF-funded projects in other countries and contributed to the efforts made in sound management of chemicals at the international level. UNIDO's professional staff reviewed the technologies available on the market, visited owners of the most advanced BAT/BEP technologies and assessed their applicability for particular conditions of the host countries. In particular the first non-combustion technology approach was used on a limited basis in the Romanian PCB project, when UNIDO assisted participating enterprises to introduce a non-combustion batch technology for PCB disposal. Later similar technologies were introduced in Macedonia and Mongolia. The PCB management and disposal facility with the decontamination technology was commissioned in the Philippines where equipment were partly fabricated locally under the supervision of the technology vendor, thus decreasing the total costs and mobilizing local investments and employment. The same non-combustion technology will be procured and installed in India.
50. UNIDO's International Centre for Science and High Technology in Trieste has been actively working in the field of assessment and comparison of available POPs destruction technologies. This scientific background is crucial for the selection of the local/indigenous and well-established technologies for the demonstration activities.
51. UNIDO has vast experience with energy intensive industries, light industries, food processing plants and others. It promotes and uses in its project the concept of cleaner production and energy efficiency. UNIDO have wide understanding of the technical, economic and social issues of management of PCB-containing equipment, particularly transformers and capacitors and with these expertise and experience, it can be a great value for the project success.
52. In this initiative, UNIDO will integrate both aspects of technology transfer and local investment in introducing technologies for PCBs decontamination, PCB waste pre-treatment and disposal, which are clearly falling in the comparative advantage domain of UNIDO.

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

53. UNIDO will provide cash and in-kind contribution of US\$ 100,000 for technology assessment, feasibility studies, facility planning, training programmes, preparation of guidelines, development of the ESM system, etc.. The Ukrainian counterpart will be invited to attend PCB-related workshops, expert group meetings, etc. regularly organized by UNIDO.

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:

54. The only available staff capacity in Ukraine is the project group formed during the Enabling Activities phase. This group will create the core of the project team (mostly the legal and inventory teams) in the proposed project. Technical specialists will be invited from PCB owners, however, at the initial stage, the project will hold the management training for the project team to be capable to run the project activities. The combination of the legislation/incentives created during the project life, the PCB inventory database, successful implementation of PCB decontamination measures at the targeted facilities and other accumulated experience and skill will permit the project team to follow up the PCB decontamination activities after the termination of the project thus contribution to the sustainability of the PCB disposal activities in the country.
55. In September 2012, UNIDO will open a National Cleaner Production Center (NCPC) in Ukraine. Linkages of the proposed project and the NCPC will be developed during the PPG phase. UNIDO is also conducting a renewable energy project in Ukraine with the objective of promoting energy efficiency and the advanced use of renewable energy sources for small and medium scale industries in agro food sector.


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)
Mr. Vadym Pozharskyi	GEF Operational Focal Point, Head of Department for International Cooperation and European Integration	MINISTRY OF ECOLOGY AND NATURAL RESOURCES	02/11/2011

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 project identification and preparation.

Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
for Mr. Dmitri Piskounov Managing Director, PTC UNIDO GEF Focal Point		07/17/2012	Mr. Zhengyou Peng	+43 1 260 26 3831	Z.Peng@unido.org