



REQUEST FOR CEO APPROVAL

PROJECT TYPE: FULL SIZE PROJECT

TYPE OF TRUST FUND GEF TRUST FUND

For more information about GEF, visit TheGEF.org

PART I: PROJECT INFORMATION

Project Title: Comprehensive reduction and elimination of Persistent Organic Pollutants in Pakistan			
Country(ies):	Pakistan	GEF Project ID: ¹	4477
GEF Agency(ies):	UNDP (select) (select)	GEF Agency Project ID:	4600
Other Executing Partner(s):		Submission Date:	30/06/2014
GEF Focal Area (s):	Persistent Organic Pollutants	Project Duration(Months)	60
Name of Parent Program (if applicable):		Project Agency Fee (\$):	515,000
<ul style="list-style-type: none"> ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/> 			

A. FOCAL AREA STRATEGY FRAMEWORK²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
Chemical Strategy Objective 1	<p>Outcome 1.4 POPs waste prevented, managed, and disposed of, and POPs contaminated sites managed in an environmentally sound manner</p> <p>Outcome 1.5 Country capacity built to effectively phase out and reduce releases of POPs</p>	<p>Output 1.4.1 PCB management plans under development and Implementation</p> <p>Output 1.4.2 Countries receiving GEF support for environmentally sound management of obsolete pesticides, including POPs.</p> <p>Output 1.5.1 Countries receiving GEF support to build capacity for the implementation of the Stockholm Convention.</p>	GEFTF	5,150,000	34,234,822
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
Total project costs				5,150,000	34,234,822

B. PROJECT FRAMEWORK

Project Objective: Reducing risks for human health and environmental by enhancing management capacities and disposal of POPs in Pakistan						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
1. Development and implementation of a Regulatory,	TA	1. Strengthened POPs regulatory and policy instruments	1. Key POPs related national legislation developed.	GEF TF	500,000	2,437,204

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.

Policy and enforcement system to reduce POPs releases		<p>adopted, POPs management systems for controlling and reducing releases of POPs functional.</p> <p>2. Government enforcement agencies and other organizations involved in regulating POPs management are able to use tools developed for POPs management and network with/regulate main agencies handling POPs.</p> <p>3. Governance and enforcement particularly on illegal imports framework for controlling POPs improved.</p> <p>4. National Chemicals Profile updated.</p>	<p>2. National Technical POPs management Guidelines developed.</p> <p>3. Roles and administrative procedures, enforcement tools for POPs management at federal/ provincial and municipal levels developed.</p> <p>4 Procedures, responsibilities and offices for the enforcement of provisions related to import/exports of POPs substances or POPs containing or contaminated articles established.</p> <p>5 Custom officers and managers trained on POPs issues and strategies.</p> <p>6. POPs management and enforcement stakeholders trained to their tasks.</p> <p>7. Data compilation and elaboration of an updated Chemicals Profile for Pakistan.</p>			
2. Capacity building of local communities and public and private sector stakeholders to reduce exposure to and releases of POPs	TA	<p>1. Stakeholder groups aware of sources and prepared to mitigate POPs exposure and releases.</p> <p>2. Cost-effective POPs exposure Mitigation undertaken focusing mainly on PCBs.</p> <p>3. POPs awareness among key target groups, such as decision makers, high/risk occupations etc. raised.</p> <p>4. Reduced POPs exposure in</p>	<p>1. Development of awareness and training programs of sources and low cost POPs exposure and release reduction steps as well as alternatives to POPs.</p> <p>2. Professional and community level training sessions on POPs exposure mainly for PCBs and release undertaken as well as risks reduction covering 30 institutes and 50 communities.</p> <p>3. Guidance for</p>	GEF TF	450,000	4,840,571

		occupational setting.	<p>exposure reduction to POPs in priority areas, including indirect exposure and gender-related exposure developed.</p> <p>4. Training on POPs, Personal Protective Equipment, Risk Management Measures and Exposure Scenarios for workers and control authorities in specific industrial sectors.</p> <p>5. A specific training activity for women addressing POPs issue implemented</p> <p>6. Training and development of guidance document for PCB holders in safe PCB handling during maintenance.</p>			
3.Collection, Transport and Disposal of PCBS and POPS Pesticides	TA	<p>1. Capacity to undertake POPs disposal projects at provincial level established.</p> <p>2 Environmentally safe disposal of particularly risky POPs stockpiles and the sound disposal of up 1500 tonnes of POPS Pesticides and PCBs</p> <p>3. National POPs management and disposal scheme and replication plan developed outside pilot provinces.</p>	<p>1.National Inventory of POPs stockpile upgraded, including map for identifying priority sites</p> <p>2 Storages upgraded and logistic plan developed</p> <p>3. Pilot inventory of PCBs (testing of at least 5000 equipment) carried out in at least one Province</p> <p>4 At least 2 PCB storage and dismantling facility upgraded.</p> <p>5. Identification, procurement and testing of disposal facilities or services.</p> <p>6. Up to 1200 tons of obsolete POPs stockpile from Punjab and Sindh province safely</p>	GEF TF	3,660,000	26,957,047

			disposed. 7. Up to 300 tons PCB equipment safely disposed. 8. National scheme for POPs disposal as a part of hazardous waste management scheme developed. 9. Nationwide PCB management strategy developed.			
4 Monitoring, Learning, Adaptive Feedback & Evaluation	TA	1. Project performance properly monitored and the impact of project activities assessed 2. Enhanced project impact. 3. Benefits from reduced POPs risk reported.	4.1 M&E and adaptive management are applied to provide feedback to the project coordination process to capitalize on the project needs; and 4.2 Lessons learned and best practices are accumulated, summarized and replicated at the country level and disseminated internationally.	GEF TF	300,000	0
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					4,9100,000	34,234,822
Project management Cost (PMC) ³				GEF TF	240,000	0
Total project costs					5,150,000	34,234,822

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 (\$)
GEF Agency	UNDP	Cash	300,000
Government	Climate Change Division	In Kind	2,070,000

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

Government	Pesticide Residue Laboratory of the Soil & Plant Nutrition Directorate of the Agricultural Research Institute, Peshawar	In Kind	1,000,000
Government	Pesticide Residue Laboratory, Institute of Soil Chemistry and Environmental Science, Faisalabad	Cash In Kind	2,025,000 1,975,000
Private Sector	PESCO	Cash In Kind	1,000,000 2,100,000
Private Sector	PCRWR	Cash In kind	210,000 387,600
Government	Pakistan Agricultural Research Center	Cash In Kind	1,600,000 2,900,000
Private Sector	La Farge	Cash	1,000,000
Private Sector	K-Electric	Cash In Kind	3,500,000 3,500,000
Private Sector	IESCO	In Kind	7,906,000
Private Sector	ECI	Cash In Kind	125,000 1,875,000
Private Sector	BOND	In Kind	254,821 506,401
(select)		(select)	
Total Co-financing			34,234,822

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
UNDP	GEF TF	Persistent Organic Pollutants	Pakistan	5,150,000	515,000	5,665,000
(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	507,000	0	507,000
National/Local Consultants	725,000	0	725,000

G. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? No

GEF5 CEO Endorsement Template-February 2013.doc

(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

- 1) There are no changes in alignment with the project design of the original PIF except minor rearrangement of outcomes and a better specification of outputs and outcomes, as following:
- 2) The original Outcomes 1 and 2 under Component 1 have been merged into one Outcome (Outcome 1.1. strengthened POPs regulatory and policy instruments adopted and POPs management systems for controlling and reducing releases of POPs functional)
- 3) The following two additional Outputs under Component 1, Outcome 1.3 are envisaged: “4 Procedures, responsibilities and offices for the enforcement of provisions related to import/exports of POPs substances or POPs containing or contaminated articles established; 5 Custom officers and managers trained on POPs issues and strategies
- 4) Outputs under Component 2 have been better specified, to include specific training on risk management measures, exposure reduction and prevention in occupational setting including the drafting of guidance documents, and specific training for increasing awareness on POPs issue of women.
- 5) Outputs under Component 3 have been better specified to include risk-priority mapping of POPs contaminated sites, upgrade of temporary POPs and PCB storage sites, testing of disposal facilities or services to ensure compliance with SC BAT/BEP requirements.
- 6) The order of Outcomes under Component 3 has been changed as following: Outcome 3.2 Environmentally safe disposal of particularly risky POPs stockpiles and the sound disposal of up 1500 tonnes of POPs Pesticides and PCBs. Outcome 3.3. National POPs management and disposal scheme and replication plan developed. This because is considered that a replication plan can be drafted only at least part of the disposal of priority POPs waste and PCBs have been successfully demonstrated and relevant lesson learnt.

A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

- 7) Pakistan has ratified the Stockholm Convention on POPs, as well as the Basel Convention on the Trans-boundary Movement of Hazardous Waste and their Disposal, and Rotterdam Convention on Prior Informed Consent for Certain Chemicals and Pesticides in International Trade
- 8) The project is compliant with the policy and action plan established by the country under the NIP.
- 9) The project is also compliant with the Pakistan Environmental Policy, as initially promulgated in 2005, which establishes that envisages to “Develop and enforce rules and regulations for proper management of municipal, industrial, hazardous and hospital wastes.”, as well as “Develop and implement strategies for integrated management of municipal, industrial, hazardous and hospital waste at national, provincial and local levels.”
- 10) The Pakistan NIP envisaged the following activities:
- 11) By the end of 2010 to prepare a phased plan to safely store and ultimately eliminate an estimated 6030 MT of obsolete POPs containing pesticides from 425 identified sites by 2012, proposed to be undertaken through Provincial programmes.
- 12) Survey completed by 2012 of other obsolete pesticide stocks/contaminated sites (if any) not yet identified as containing POPs, including the necessary sampling and analysis.
- 13) A phased plan developed and implemented between 2010 and 2012 to safely store and ultimately eliminate remaining obsolete pesticides and rehabilitate all contaminated sites by 2015, proposed to be undertaken through Provincial programmes.

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.

- 14) The project is consistent with NIP activities and priorities, although these activities have been not implemented yet and, also due to also because of the floods that affected Pakistan in 2010 and 2011
- 15) Recently the Federal Government has taken up the revision of Agricultural Pesticides Act (APA) to make it abreast with the recent developments in the world. The legislation on the specifications of pesticides already exists in the Agricultural Pesticides Rules 1973. Method of analysis involves CIPAC, AOAC, PAC etc. The check on the quality of pesticides, curbing the practice of sale of adulterated / sub-standard pesticides, is maintained through network of inspectors and pesticides laboratories. There are at present 10 pesticide laboratories with Public / Semi-Government sector, 29 with the private sector. Additionally under new legislation 50 repackaging units are also required to established pesticides laboratories.
- 16) Government with the coordination of industry takes care of human health and the Environment. Rules 37 to 41 specially mention all the requirements, which are necessary for Health and Environment.

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

- 17) Applicable GEF Strategic Objective and Program: Objective 1: Phase out POPs and reduce POPs releases
- 18) Applicable GEF Expected Outcomes: Outcome 1.3 POPs releases to the environment reduced; Outcome 1.4 POPs waste prevented, managed, and disposed of, and POPs contaminated sites managed in an environmentally sound manner; Outcome 1.5 Country capacity built to effectively phase out and reduce releases of POPs.
- 19) Applicable GEF Outcome Indicators: Indicator 1.4.1 Amount of PCBs and PCB-related wastes disposed of, or decontaminated; measured in tons as recorded in the POPs tracking tool. Indicator 1.4.2 Amount of obsolete pesticides, including POPs, disposed of in an environmentally sound manner; measured in tons. Indicator 1.5.2 Progress in developing and implementing a legislative and regulatory framework for environmentally sound management of POPs, and for the sound management of chemicals in general, as recorded in the POPs tracking tool.
- 20) The goal of the GEF 5 chemicals program is to “promote the sound management of chemicals throughout their life-cycle in ways that lead to the minimization of significant adverse effects on human health and the global environment”. The project is consistent with the Objective 1 of the GEF 5 Chemical strategy: “POPs waste prevented, managed, and disposed of, and POPs contaminated sites managed in an environmentally sound manner” where it is clearly established that inventories and development of management plans for contaminated sites, including risk assessment and prioritization; and, where warranted by pressing health or environmental concerns, supporting partnerships for remediation and piloting remediation technologies.

A.3 The GEF Agency’s comparative advantage

- 21) UNDP has been identified as the GEF IAs for having a strong country office and experience in providing technical assistance to Pakistan for environmental issues in general. UNDP was a pioneer in promoting community-based environmental conservation projects in the region. Presently, a number of full-sized and medium-sized GEF project are under implementation with the technical and financial support of the UNDP. It has also been instrumental in mobilizing co-financing for the GEF project and encouraging host country for baseline investments. UNDP Pakistan also has an experience supporting “Enabling Activity for the Preparation of National Implementation Plan for POPs Phase Out” funded by GEF.
- 22) Globally, UNDP has supported more than 15 countries in “post-NIP” projects particularly assisting in safe management of POPs pesticides and PCBs. To date, GEF funding has been approved for UNDP supported PCB management activities in the following 9 countries: Argentina, Brazil, Ghana, Kazakhstan, Kyrgyzstan, Latvia, Mexico, Morocco and Uruguay. Large pesticide POPs programs are supported by UNDP in China, Nicaragua and Vietnam. In addition, several POPs multi-contaminant projects are providing technical assistance for disposal of POPs pesticides as well as PCB.

- 23) The project would contribute to Pakistan One Plan Outcome – “Increased national resilience to disasters, crises and external shocks.”
- 24) National Staff is well positioned in terms of their understanding of POPs and PCB issues as well as sector knowledge for handling this project. UNDP also has a network of experts and organisations which have strengths in supporting this project at national level. (e.g., Eco-Conservation Initiatives (ECI), Pakistan Agricultural Research Council (PARC) and Human Development Foundation (HDF)). Technical backstopping will be provided by UNDP Regional Centre staff handling chemicals issues, HQ technical staff and international technical experts as required.

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

SITUATION ANALYSIS

a. Environmental legislation and its links with legislation on POPs.

- 25) Pakistan has banned use of all severely toxic and hazardous pesticides included in the PIC and POP list in the early 1990s. In addition to PIC/ POP pesticides, several other pesticides have also been banned. Recently the government is considering to ban all formulations of monocrotophos and methamidophos. Practically no pesticide falling in the WHO Category I is used. Due to availability of comparatively safe new chemistry molecules and IGRs at competitive prices, the use of pesticides falling into WHO Category II is also declining.
- 26) The Agricultural Pesticides Rules provides that the destruction and removal of the empty packages and pesticides remains shall be treated in such a manner that sources of water supply are not contaminated. The unclean packages shall be destroyed in a way as to preclude the possibility of their being reused for any purpose other than as base material. Further procedures for disposal of surplus pesticides and pesticides containers have been notified in 1984 encompassing small use, commercial and municipal use, in situ-disposal; organized disposal and landfill disposal sites. National legislation exists in the form of Agricultural Pesticides Ordinance 1971 which is supported by the Agricultural Pesticides Rules 1973. The Rules are amended from time to time with the approval of Agricultural Pesticides Technical Advisory Committee (APTAC). APTAC is at liberty to nominate sub committees and can entrust them specific duties. Liberalization of pesticide trade had been welcomed as it had given benefit to the farmers. Unfortunately, this has not been entirely problem free. In some cases, unethical activities such as: formulating pesticides using active ingredient in substandard quantity and adulteration at supply chain, packing, distribution and marketing level were reported. These malpractices are affecting the plant protection quality and causing damage to the environment.
- 27) The list of the main relevant legislation in Pakistan follows.
- 28) **National Environmental Policy (NEP-2005).**The National Environment Policy provides an overarching framework for addressing the environmental issues facing Pakistan, particularly pollution of fresh water bodies and coastal waters, air pollution, lack of proper waste management, deforestation, loss of biodiversity, desertification, natural disasters and climate change. It also gives directions for addressing the cross sector issues as well as the underlying causes of environmental degradation and meeting international obligations.
- 29) NEP-2005 goal is to protect, conserve and restore Pakistan’s environment in order to improve the quality of life of the citizens through sustainable development.
- 30) NEP-2005 objectives are:
 - Conservation, restoration and efficient management of environmental resources
 - Integration of environmental consideration in policy making and planning processes.
 - Capacity building of government agencies and other stakeholders at all levels for better environment management
 - Meeting international obligation effectively in line with the national aspirations.
 - Creation of a demand for environment through mass awareness and community mobilization
- 31) The NEP is a framework policy and does not contain direct reference to POPs. The only direct reference on chemicals is made under section 3.8 (Agriculture and Livestock) where is stated that “To achieve sustainable agricultural and livestock development, the government may promote integrated pest management and discourage indiscriminate use of agrochemicals”
- 32) The only law having direct significance with respect to POPs in Pakistan is the Agricultural Pesticides Ordinance, 1971. This law was promulgated in 1971 with the purpose of regulating the import, manufacture,

formulation, sale, distribution and use of Pesticides in Pakistan. The provisions of this law are supposed to be applied parallel to other laws. Eight POPs are included in the Agricultural Pesticides Ordinance. This ordinance has to be updated with the new pesticidal POPs.

- 33) **Agricultural Pesticides Rules, 1973.** Pursuant to the above enactment, rules were made by the Agricultural Pesticides Rules, 1973. The rules give the detailed procedures for complying with the provisions of the main law. They contain provisions giving details of registration procedure, grounds for refusal to register. Certain pesticides including some POPs need to be labelled as POISON.
- 34) In January, 2004 rule 12-A was added which makes it incumbent upon the importers, manufacturers and formulators to themselves supervise the packing of pesticides. They are also required to certify that the pesticides are not on the negative list in the developed countries like those of the European Union, as well as other chemicals producing countries such as China and India. The penalty for violating provisions of this law range with imprisonment between 1 and 3 years and with fine up to Rs.500.000. In Pakistan the Globally Harmonized System (GHS) for the classification and labelling of chemicals is not implemented. There is currently no information available on future plans for the implementation of GHS.
- 35) **PCBs and Hazardous Waste.** While sections 13 and 14 of the Environmental Act 1997 dealt with hazardous waste substances, there are no operating rules and regulations developed which was why importers used the loopholes to their advantage.
- 36) According to Pakistan Environmental Protection Act - 1997, "waste" means any substance or object which has been, is being or is intended to be, discarded or disposed of, and includes liquid waste, solid waste, waste gases, suspended waste, industrial waste, agricultural waste, nuclear waste, municipal waste, hospital waste, used polyethylene bags and residues from the incineration of all types of waste.
- 37) **Pakistan Environmental Protection Act 1997** defines "Hazardous substance" as (a) a substance or mixture of substance, other than a pesticide as defined in the Agricultural Pesticide Ordinance, 1971 (II of 1971), which, by reason of its chemical activity is toxic, explosive, flammable, corrosive, radioactive or other characteristics causes, or is likely to cause, directly or in combination with other matters, an adverse environmental effect; and (b) any substance which may be prescribed as a hazardous substance.
- 38) There is no specific law on polychlorinated biphenyls (PCBs). The production, supply & use of PCBs is not specifically regulated in any way in Pakistan. More importantly, Pakistan completely lacks of any norm regulating the inventory and management of PCB containing equipment and wastes.
- 39) Sections 13 & 14 of PEPA 97 deal, in general, with prohibition of import of hazardous wastes & handling of hazardous substances. PEPA-1997, Section 11 prohibits discharges/emissions into environment above National Environmental Quality Standards (NEQS). PCBs are in the list of hazardous substance under the "Hazardous Substances Rules 2003, but as the majority of other POPs have not been specifically included in the list of NEQS. PCBs are not given as "Banned Items" (Negative List) or "Restricted Items" in the "Import Trade and Procedures Order, 2000."
- 40) **Provincial environmental regulation.** As the power on environmental affairs has been delegated to the Provinces, each province issued its own Environmental Protection Act and the relevant downstream regulation. In general, these are based or reflect the National Environmental Policy and the Pakistan Environmental Protection Act. Based on delegation of powers to the provincial environment ministries, they will have to play active role in pesticides related legislation, disposal of POPs & PCBs, institutional capacity building and M&E arrangement. The situation of POPs pesticides in Pakistan
- 41) During 1950s and with the high slogans of green revolution, the Department of Plant Protection promoted the use of chemical pesticides without clearly knowing the non-degradable nature of POPs in Pakistan agriculture as a remedy of all the insect pest issues. This also led to the indiscriminate use of chemical pesticides without any distinction of the POPs pesticides. Because of poor governance and lack of implementation mechanism for the existing pesticides laws of 1971 and 1973 related to storage, transportation and application of chemical pesticides existing legislation is ineffective. During recent site visits under PPG activity and meetings with pesticide dealers, it was clearly noted that not only expired, obsolete and POPs contaminated pesticides are secretly sold in the market but also they are being widely used as household pesticides with new labels. Therefore, there is an urgent need for strict implementation of pesticides related rules and regulations. Moreover, the Department of Plant Protection has emphasized to update the legislation by also including clauses about household pesticides. The use of pesticides in Pakistan commenced with the introduction of an aerial spraying program on the key crops such as, cotton, rice and sugarcane. Simultaneously, pesticides were also used for locust control. The desert locust control program was organized through an international network

coordinated by the FAO. Before 1971, pesticides to be imported were standardized by the Federal Government through Department of Plant Protection (DPP), since no rules and regulations were in place. Agricultural Pesticides Ordinance (APO) was promulgated in 1971 to regulate import, manufacture, formulation, sale, distribution, use and advertisement of pesticides. The DPP play an important role in legislation, disposal, capacity building and M&E. Agricultural Pesticides Rules were made thereunder in 1973 and the whole business was put under regular standardization and registration with the help of Provincial Agriculture Departments. Department of Plant Protection under the policy advice of the Ministry of Food, Agriculture & Livestock now called as Ministry of National Food Security and Research has the mandate of registration and management of pesticides meant for the plant/crop protection or agriculture purpose.

- 42) Local manufacturing in the country is very limited and is restricted to Aluminium phosphide, Copper oxychloride and Zinc phosphide only. Therefore local chemical manufacturing is not related to the production of organic pesticides which may lead to the generation of POPs as final products or by-products. POPs pesticide entered therefore the country only as imported chemicals. Local formulation has increased from 14% in 1984 to about 70% in 2004 of the total supply. There are over two dozen formulation plants in the country. For local formulation, the technical grade of a pesticide and other substances including emulsifier, carrier and stabilizer etc. are imported separately, which, together with a solvent, generally xylene (locally available), are blended in precise proportions to produce the finished product.
- 43) Due to increasing consumption of pesticides, different advanced technologies are required for new formulations. New formulations are mainly addressed at a better dispersion or controlled release of pesticides which reduced their consumption without reducing their effectiveness. New pesticide formulation are aimed for instance at a better foliar penetration, reduced odour, better use with modern sprayers, etc..

b. The situation of POPs stockpiles in Pakistan

- 44) Based on the inventory survey conducted during the NIP preparation, there are approximately 6033 MT of obsolete stocks of POPs pesticides (3800 MT Punjab, 2016 MT Sindh, 48 MT KPK, 135 MT Balochistan, 31.5 MT AJK and 0.5 MT Northern areas). Large stocks of obsolete pesticides are situated in areas of intensive cash crops/ agricultural activities.
- 45) Since stockpiles are located in towns or villages and near water bodies, there are potential human health and environmental risks. In 2010, a disastrous flood affected some of the areas where pesticide stockpiles are located, therefore the existence of these stockpile (has been recently) reconfirmed by site surveys. The initial information consisted in media reports informing that some of the pesticide stocks in Balochistan (Pasni), Punjan (District Muzaffargarh) and Sindh (Khairpur) were washed away during the floods. Indeed, most of the warehouses and stores of pesticides have very old and poorly developed infrastructure that is currently in very fragile condition as has also been observed during the site visits carried out under PPG activities to District Rahim Yar Khan, Bahawalpur and parts of Sindh province that a large proportion of the pesticides was leaking into soil during the heavy rains causing environmental pollution. As explained in other parts of this document, the site surveys carried out during PPG activities were independently carried out by UNDP still in course of verification and endorsement by the government. In any case, the risk that these hazardous chemicals may enter the environment because of further floods are significant and to destroy these stockpiles in an environmentally sound way is an extremely urgent task.
- 46) The inventory survey of POPs stockpiles carried out in 2004-2005 – mainly based on information dated back to 1970s and 1980s - during NIP preparation delineated the following situation:
 - In Punjab a total of 167 stock piles have been reported which contain 3800 tons of POPs pesticide
 - In Sindh, 2016 tons of POPs pesticides are reported. The biggest dump was reported to be in Provincial Store, located in Malir city, Karachi that contained about 400 tons of obsolete pesticides; however Hyderabad holds largest stock pile of POP pesticides.
 - In KPK, presence of Dieldrin is reported in the custody of Agriculture Officer Nawagai Circle Store, contained in two iron drums about 25 km away from Daggar.
 - In Balochistan, the presence of large quantity of the POPs pesticides has been reported in the stores of the public sector Departments at Quetta. The stock piles mainly contain Eldrin, Dieldrin, Endrin, Heptachlor, Chlordane and BHC. However, few small quantities of BHC & Dieldrin are reported at Loralai, Ziarat and Dera Murad Jamali. The exact quantity of the B.H.C has not been measured as it is very difficult to do so due to poor storage conditions.

- DI Khan District works as transportation route of POPs pesticides smuggled items from Iran via tribal areas through Afghanistan due to its geographical location.
- In Azad Jammu and Kashmir (AJK) 31.5MT and in the Northern areas 0.5MT of POPs pesticides have been reported.

c. Comparison of the POPs pesticide stockpiles between 2014 and 2004-05 in Pakistan

- 47) In the course of project preparation activities, site visits to the pesticide stockpile areas were conducted by UNDP consultants to verify the status of the stockpiles and update – on the basis of visual inspection and collection of data and records – the amount of POPs and obsolete pesticides still stored.
- 48) During recent site visits, it was found that a large part of pesticide dumps were displaced from 1994-97. However, some of the major sites in Sindh, Punjab and KPK have been visited to reconfirm. These sites still contain major stocks of POPs pesticides as well as PCBs contaminated equipment due to agro-industrial activities that have been and are currently taking place in these areas. The pesticides stocks visited in KPK are intact but a large part was also either leaked or stolen. The condition of stocks is highly dilapidated. DPP has assured to provide some quantitative data that is still awaited. . These data may not be accurately available except the best estimates as made by the Department of Plant Protection. Due to financial as well as management issues, DPP has not been able to update the data. The data available was mostly collected during 1970s and 1980s and very little could be updated of only some of the sites.
- 49) In the summary table reported below, the outcome of this survey are summarized. Some of stocks were reduced in volume or disappeared altogether due to poor storage infrastructure, leakage in the soil, intermittent theft for relabeling and resale for control of household pests and also due to planned transportation and dumping in the desert areas of Cholistan, Mianwali and Dera Ghazi Khan. During recent site surveys, some of these sites have also be located. In few cases, the survey evidenced larger amount of chemicals compared to the previous estimates, either because of likely underestimation on the previous survey, or because of actual increase of chemicals collected and stored in these sites.

Independent Evaluation of sites by UNDP		POPs Inventory by GOP-CCD	
Province	District/Location	Reported Quantity	
		2014	2004-05
Punjab	Lahore (Walton & Dharampura) Plant Protection Department	100 Tons	43 Tons (Reported during different surveys)
	Rawalpindi (Murree Road-Data Gunj Baksh Road, Plant Protection Department)	N.A (The store could not be opened)	N.A (No data incorporated in the inventory)
	Bahawalpur (Opposite to Baghdad Railway Station), Plant Protection Department	1,000+ Tons	42.1 Tons
	Rahim Yar Khan (Lakki Wala Farms, Chak-101), Plant Protection Department	500+ Tons	10.8 Tons
Sindh	Karachi (Malir Halt)	Shifted and dumped in Thatta (Gharo) during 1994-97. Now Malir District Court	20 Tons and 15,425 liter

		established at the same site.	
	Hyderabad	Official infrastructure raised on the store site	2 Tons
	Nowshero Feroze, Kandiaro, Benazirabad, Sukkur, Larkana (Agricultural Extension Department, Sindh)	800 Tons still intact stores with obsolete pesticides of the Provincial AEDs	Nowshero Feroz (78.3 Tons) Kandiaro (1.2 Tons) Benazirabad/Nawabshah (22.6 Tons) Sukkur (9.4 Tons) Larkana (37.3 Tons)
Balochistan	Quetta, Brewery Road	Still intact store with obsolete pesticides mostly with BHC stocks. 2 trucks of Malathion recently added	Quetta 49 Tons
	Pasni	Few Kgs, mostly BHC stocks but washed away during floods of Shadi Core dam	NA
	Gawadar, Turbat, Panjgur	15 tons. Stores are still intact	(Pangur 102 Tons) (Turbat 94 Tons)
KPK	AED Tarnab Farms, Peshwar	6.3 tons still intact in the store	400 Ltr.
	Nowshera at DDT Factory site	Site demolished and converted into housing society. Stocks dumped near Kabul River and some in Nizampur area	NA (No data incorporated in the inventory)
	PPD, Jamrud Road, Peshawar	Obsolete pesticides stock still available but in highly dilapidated form	NA (No data incorporated in the inventory)
	Most of the stocks with AED Department, KPK	Dumped at barren sites; some along Kabul River and Nizam pur area.	N.A

- 50) It is important to underline that the comparison of obsolete / POPs contaminated pesticide stockpiles has been prepared through an independent third party evaluation conducted by UNDP Pakistan for the purpose of ProDoc preparation. However, it still needs endorsement by the relevant Departments of Government of Pakistan that is in process. In addition to this, some of the sites in District Bahawalpur (Cholistan desert, Yazman Mandi), District Mianwali (Satrah) and District D. G. Khan have been identified where obsolete / POPs contaminated pesticides were dumped at different intervals that also need government endorsement. There is no proper record of thousands of tons of the obsolete / POPs contaminated pesticide stocks available with pesticide dealers and some of the pesticide companies. This indicates that there is a clear need to examine the cause of data gap as well as to identify and secure POPs stockpiles for storage and disposal.
- 51) There are several gaps with regard to POPs-pesticides management in the country. These include: inadequate policies, lack of implementation mechanism, lack of planned monitoring and poor legislation to govern POPs-pesticides management, monitoring, search for suitable alternatives, liability for POPs waste disposal and remediation of sites contaminated with POPs, public information dissemination, education and awareness.
- 52) There are no guidelines to guide POPs waste management and remediation of POPs contaminated sites. All the gaps that were individuated at NIP preparation stage were reconfirmed in the recent fact finding mission carried out in the course of project preparation. These are:

- Weak enforcement of the existing legislation relevant to POPs management;
- Inadequate capacity and experience for tracking human and environmental effects caused by POPs and their alternatives;
- Few institutions have laboratory facilities and trained personnel that can facilitate monitoring of POPs and their alternatives; these laboratories run usually on project basis, therefore the specialized personnel leave at the end of the project, and very often the equipment is left unused for years;
- Other deficiencies include: limited research on alternatives of intentionally produced POPs, poor documentation system of POPs information both in the private and government institutions and lack of awareness at all levels.
- Also there is lack of planned information dissemination strategy to inform the public on POPs issues and weak mechanism to facilitate coordination and reporting on POPs issues

c. The situation of PCBs in Pakistan

- 53) The initial survey reports quoted in the NIP from Sindh, Punjab and KPK have indicated that about 80% of the samples tested (45 samples) in the provinces had PCB levels higher than the safe limits (> than 50 ppm). The samples were taken in containers of drained oil, in transformers and in soil located within the “transformer reclamation facilities“, and analyzed with test kits (Clor-N-oil). The overall number of transformers installed in Pakistan (on the side of electricity production and distribution) exceeds 470000 units. Most of the issues listed in the NIP were reconfirmed during the Project Preparation stage, namely:
- there is not any PCB management in place either at national or at any electric power company level, although in many cases pure PCB transformers have been found based on their label;
 - damaged transformers or end of life transformers are usually sent to reclamation centers without any checking of PCBs. At the reclamation centers, these transformers are either reclaimed, auctioned as a whole, or disposed off as scrap material after being drained and dismantled
 - reclamation centers operate without significant protection of the worker’s health or the environment.
 - auctioned transformers may easily cross the Pakistan border with Afghanistan.
 - Meetings with Electrical Companies (IESCO, K-E) revealed that in some cases, electrical companies are carrying out identification of PCB equipment limited to the power transformers. Distribution transformers are not tested because of their large number.
- 54) In the Inventory of POPs 2004-05, only quantitative figures of total number of functional (471,316) and damaged / outdated (376,242) distribution transformers in Pakistan has been mentioned. During recent site surveys, 46,000 old / outdated distribution transformers by IESCO and 6,000 by KE have been reported with possible PCB contamination. The PCBs Inventory has still to be prepared with formal sampling and chemical analysis of the transformers for PCBs contamination.
- 55) Historically it has been demonstrated in a number of countries that low-contaminated (i.e. PCB concentration ranging from 50 ppm to several thousands ppm) always exist along with PCB based electrical equipment.
- 56) For instance, it is well known that in North America, the data concerning the PCB inventory show that near 10% mineral oil transformers (i.e., transformers designed for working with non PCB oil) are contaminated by PCB with a concentration greater than 50 ppm, and that near 1% of the mineral oil transformers are contaminated with a PCB concentration greater than 500 ppm. Taking into consideration European data as a comparison, in Italy, over an estimated number of transformers and capacitors (mainly from the electricity production sector) in the order of 700.000 the overall number of PCB contaminated transformers was near 100,000 pieces, i.e. near 14% of the overall number of transformers was found PCB contaminated.
- 57) Preliminary inventory of PCBs carried out at NIP stage revealed that this situation is common also to many other Middle East, South and Southeast Asian developing countries, like Iran, India, Indonesia, Cambodia, Philippines, Vietnam and many others. On the basis of these percentages, it is reasonable to assume that even in Pakistan, the number of transformers cross contaminated by PCBs may range from 5% to 15% of the overall transformers as has generally been observed in other countries in the South and Southeast Asian region.

d. Institutional arrangement of the Electricity System

- 58) In Pakistan currently, the Water and Power Development Authority (WAPDA) with its national headquarters based in Lahore has the specific role of establishment and supervision of the hydro-electric power projects. The electricity supply service in Pakistan, initially, was undertaken by different agencies, both in public and private

sectors, in different areas. In order to provide for the unified and coordinated development of the water and power resources, Water and Power Development Authority (WAPDA) was created in 1958 through WAPDA Act, 1958.

- 59) Electricity distribution services were being performed by various Regions of WAPDA in various localities. The Area Electricity Boards (AEB) were established under the AEB scheme in 1982 in order to provide more autonomy and representation to provincial governments, elected representatives, industries, farmers and other interest groups in functions of the AEBs. A total of 8 AEBs were established for this purpose. In 1994, a Strategic Plan for Pakistan Power Sector Reform was approved by the Government of Pakistan which subsequently resulted in the unbundling of WAPDA's power wing into 14 companies for power generation, transmission and distribution of electricity. The aim was corporatization, commercialization and eventual privatization of these organizations, known as GENCOs (Generation Companies), National Transmission and Power Dispatch Company (NTDC) and Distribution Companies (DISCOs) today.
- 60) The distribution of power has been assigned to 11 electricity distribution companies known as DISCOs with their autonomous institutional status. These companies include: Islamabad Electric Supply Company (IESCO), Lahore Electric Supply Company (LESCO); Gujranwala Electric Supply Company (GESCO); Peshawar Electric Supply Company (PESCO), Quetta Electric Supply Company (QESCO), Multan Electric Supply Company (MESCO); Faisalabad Electric Supply Company (FESCO); Sukkur Electric Supply Company (SESCO), Tribal Electric Supply Company (TESCO), Karachi Electric (KE), Hyderabad Electric Supply Company (HESCO). In addition to WAPDA, Hub Power Company and Kot Addu Power Company are also established. Each of the company takes care of its power transformers and manages the reclamation centers that are also called as reclamation workshops for repair and disposal of the outdated transformers but with insufficient health & environmental safeguards. Under the new management arrangements in power sector of Pakistan WAPDA is only responsible for hydro-power projects while the tasks related to distribution of electricity has been assigned to the companies known as DISCOs..

d. POPs Monitoring capability in Pakistan

- 61) As indicated earlier, most of the POPs pesticide stockpiles and PCBs contaminated equipment mainly those related to electric power companies are intact despite the earthquake of 2005 and flash floods of 2010-11. However, there is no organized system of monitoring of these substances either due to unavailability of an organized monitoring system or lack of coordination among the relevant line agencies. With the technical backstopping of current project, monitoring capability of Pakistan may be efficiently built by the involvement of relevant provincial environmental ministries.
- 62) There are many laboratories established in the major cities of Pakistan for quantitative and qualitative chemical analysis of agricultural and industrial substances. Some of these labs have also the capacity to test POPs and PCBs but they are short of availability of required chemicals, standards, columns and trained human resources. In the course of project proposal preparation, some of the important labs were visited including Eco-Toxicological Labs. National Agricultural Research Center under Pakistan Agricultural Research Council (PARC); Pesticides Residue Labs, Kala Shah Kaku, Lahore; Pakistan Council of Research in Water Resources (PCRWR) under Ministry of Science and Technology, Islamabad; National Physical and Standards Labs (NPSL) under (Pakistan Council of Scientific and Industrial Research (PCSIR), Islamabad; Nuclear Institute of Food and Agriculture (NIFA), Peshawar and Pesticides Quality Labs, Tarnab, Peshawar. Partnerships or service contracts could be established with some of the labs to meet the project needs for POPs and PCBs analysis as well as capacity building of the relevant stakeholders. The testing will be mostly carried out by means of portable chlorine detectors or screening kits, whose results will be confirmed by laboratory analysis (GC/ECD).

e. POPs Disposal capability in Pakistan

- 63) Availability of facilities in Pakistan for the safe disposal of hazardous waste is generally missing. However, during recent meetings with the PPD Karachi, they informed that near Lahore – Kasur, a private incinerator approved by EPA Punjab with the capacity of disposing off about 500 Kg of POPs / Pesticides with a temperature of 1600 degree Celsius and by charging fee @Rs.50/- per Kg has been installed. This facility is being used by private investors on commercial basis. They claim to dispose off all sorts of obsolete & POPs contaminated pesticides as well as medical & industrial wastes However during a recent meeting with them, the owners of this plant did not seem confident about their business feasibility and neither willing to

demonstrate their incineration plant to private sector. There are therefore no evidences that the facility is compliant with SC requirements.

- 64) Apparently, there were no improvement on the disposal capacity after NIP. The only significant change found in the course of the fact-finding mission (March 2014) was the established capacity of the Lafarge cement kiln plant in Islamabad to dispose off Hazardous waste.
- 65) The Lafarge Group has incorporated “Industrial Ecology” which basically plays the role of a waste manager / disposer company in compliance with Basel Convention requirements. The Industrial Ecology unit in Pakistan has already performed the disposal of approx. 475 tons of pesticides from locally based international chemical companies which needed to dispose a stock of obsolete chemicals over the last three years. To fulfil the requirements of the client, the wastes were disposed in compliance with European standards for the incineration of Hazardous Waste while remaining within National Environmental Quality Standards.
- 66) Currently, the Lafarge cement factory in Chakwal produces around 7000 tons of clinker per day. Lafarge Pakistan already invested in the installation of a feeding system to reduce the manual interaction for hazardous waste and facilitating the dosing of waste entering the system; the cement kiln is also equipped with state of the art gas and liquid fuel feeding systems. Reportedly, the Lafarge cement kiln is currently accepting around 1.2% chlorine content in the waste fed to the system without any process impact. The feeding system is currently facilitating the consumption of around 750 metric tons of material per day. Theoretically, assuming an average chlorine content in the POPs waste of around 50%, the plant could dispose around 9 tons per day of POPs chemicals.

BASELINE PROJECT

- 67) At the country level, except the NIP action plan, there is not yet a coordinated project for managing POPs pesticide stockpiles, PCB waste, and for filling regulatory gaps and raising awareness on POPs. There are however a number of scattered activities aiming at solving at least the most urgent issues.
- 68) On the side of policy and regulatory upgrade, much more has still to be done starting from the scratch as the existing policies and regulations don't have enough provision for monitoring, identification and disposal of POPs pesticides and PCBs.

a. POPs pesticides stockpiles.

- 69) Recently the Federal Government has taken up the revision of Agricultural Pesticides Act (APA) to make it abreast with the recent developments in the world. The legislation on the specifications of pesticides already exists in the Agricultural Pesticides Rules 1973. Method of analysis involves CIPAC, AOAC, PAC etc. The check on the quality of pesticides, curbing the practice of sale of adulterated / sub-standard pesticides, is maintained through network of inspectors and pesticides laboratories. There are at present 10 pesticide laboratories with Public / Semi-Government sector, 29 with the private sector. Additionally under new legislation 50 repackaging units are also required to establish pesticides laboratories.
- 70) Government with the coordination of industry takes care of human health and the Environment. Rules 37 to 41 specially mention all the requirements, which are necessary for Health and Environment.
- 71) There are regular surveys on occupational poisoning cases among farmers and industrial workers. Two poison centers are established in the country. One is in Faisalabad and the other is in Karachi.
- 72) NIP envisaged the following activities:
- 73) By the end of 2010 to prepare a phased plan to safely store and ultimately eliminate an estimated 6030 MT of obsolete POPs containing pesticides from 425 identified sites by 2012, proposed to be undertaken through Provincial programmes.
- 74) Survey completed by 2012 of other obsolete pesticide stocks/contaminated sites (if any) not yet identified as containing POPs, including the necessary sampling and analysis.
- 75) A phased plan developed and implemented between 2010 and 2012 to safely store and ultimately eliminate remaining obsolete pesticides and rehabilitate all contaminated sites by 2015, proposed to be undertaken through Provincial programmes.
- 76) These activities have not been implemented yet and, also due to the floods that affected Pakistan in 2010 and 2011,
- 77) **PCBs**, The following activities proposed under NIP did not start yet :

- Completion by the end of 2013 of PCB survey of 471,316 working and 376,242 damaged transformers with planned sampling and analytical program to determine extent of PCB contamination, and identify equipment to be urgently replaced and sites needing rehabilitation.
 - Development with the electricity generation and transmission and other appropriate authorities by the end of 2013 of a phased PCB contaminated transformer elimination program, for implementation within the 2025 target, with urgent attention given to eliminating leaking equipment.
 - By 2012, prepare projects detailing program for decontamination and rehabilitation of sites contaminated with PCBs, for implementation by 2025.
 - By 2015, prepare a review of cost effective options for destruction of PCB contaminated oils and environmentally sound management of PCB contaminated equipment, as are expected to be generated through the decommissioning programme above, and prepare corresponding projects.
- 78) The distribution companies (DISCOs) are expanding their transformer replacement program set-up as a part of providing reliable electricity services to its customers. Mainly due to pressures exerted by international financial agencies that are supporting Pakistan in extending its electricity grid (World Bank and ADB), there is now a greater attention toward the environmental issues; however only recently some of the distribution companies (DISCO) decided to place specific restriction against PCB containing transformers in their procurement bids.
- 79) There is obviously the intention to upgrade the maintenance workshops but this activity did not start yet. DISCOs like IESCO (Islamabad Electricity Supply Company) are aware of the need to have their transformers tested for PCBs for establishing a sound PCB management plan. A PCB testing plan has been designed by IESCO for this purpose and is undergoing approval under their management board.
- 80) Plans for improving maintenance workshops so that these are knowledgeable in identifying PCBs in transformers and oils, putting aside PCB containing oils and equipment have been reported.
- 81) However, taking into account recent site visits to IESCO, PESCO, LESCO and HESCO during PPG activity, the condition of both the public and private sector reclamation workshops seem very poor. There is almost zero awareness among the staff about long-term impacts of PCBs on their health as well as environment. In the course of the preparation activities, a few electric companies such as IESCO did not respond to the request of allowing sampling of dielectric oil in the transformers stored in their reclamation workshop and of soil for detection of PCBs. However, at later stage they agreed to cooperate on sampling and analysis of PCB once they would be formally partnering with the project.
- 82) It has been reported that precautions on preventing cross-contamination of PCBs will be set in place at WAPDA workshops where PCB management awareness is sufficient. However, disposal solutions for PCBs equipment and oils have not been identified yet. .
- 83) IESCO recently (2007), upon requirement established for accessing a World Bank loan, banned the procurement of PCB transformer, setting specific requirements on their bidding procurement rules and is planning to start inventory activity of the company's transformers.

Barriers analysis

- 84) The following barriers have been identified that prevent Pakistan to consistently implement a sound management and disposal of POPs pesticide stockpiles and PCBs in the country:
- a) Environmental and chemical regulation is still incomplete and not compliant with SC requirements. In Pakistan, a set of environmental related regulation does exist both on the side of environmental protection and pesticide management. However part of the regulation is not yet compliant with SC requirements, with specific reference to the list of restricted chemicals, the management of hazardous waste, including waste containing POPs or PCBs.
 - b) Limited awareness on POPs pesticides issue. Although efforts have been carried out, awareness on the safe use of pesticides is lacking. There is the concrete risk that POPs pesticides or obsolete pesticides are illegally traded, as there is still the perception that these pesticides are "very effective".
 - c) Absence of awareness of the PCBs issue. The current management of end of life equipment by the electric power companies demonstrate the almost complete lacking of awareness of the PCB issue, with specific reference to mineral oil transformers possibly contaminated by PCB. Electric power companies are not clear about their liability and the extent of the PCB issue in their companies.

- d) Lack of understanding of the importance of preventive actions, including the use of Personal Protective Equipment. Visit to PCB reclamation facilities confirmed that there are no measures in place to prevent the contact of the workers with PCBs, and to prevent leaking of PCB contaminated oil in the environment.
 - e) Lack of control of POPs and PCBs across borders of the country. Reportedly, near end of life transformers are auctioned and very often sold to neighbouring countries without any checking on their PCB content. The traffic of POPs chemicals across some Pakistan borders has been also documented
 - f) Lack of disposal facilities and of procedures for testing and permitting the disposal of hazardous waste. Up to now, only one facility fulfilling SC and Basel requirements for the disposal of POPs waste has been identified. There are no official rules for permitting and testing disposal facilities in the country, therefore this capacity has to be developed.
 - g) Lacking of the monitoring capability. With few exceptions, most of the laboratories capable to carry out POPs monitoring work only when subsidizing funds (either from the government or for cooperation projects) are available. When the flow of funds ends, laboratories cease their activities, the maintenance of sensitive laboratory instrument ends, and the laboratory staff leaves.
 - h) Lacking of standard methodologies for selecting and evaluating POPs remediation technologies. There is not an agreed methodology /guidance for the evaluation, testing and inspection of remediation and disposal technologies, which ensure that these technologies are in compliance with the Stockholm Convention.
- 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:

Incremental reasoning and expected global, national and local benefits

- 85) As detailed in section (Baseline analysis) and (Baseline project), only limited activities are being carried out in Pakistan to establish an environmentally sound management of POPs stockpiles and PCBs. Although efforts on carrying out inventory on POPs stockpile are being made, and an increased attention on the PCBs issue is also being paid by financial agencies such as WB) for assisting Pakistan in expanding its electrical network, it is quite clear that these effort are mostly uncoordinated and that in the absence of the catalytic support from the project the same will lead to limited results.
- 86) Evidences have been found that European chemical industries operating in Pakistan committed to fulfil EU standards for the disposal of hazardous waste, and have established procedures and technologies to ensure the compliance of the Stockholm and Basel Conventions for waste management and disposal. These efforts are, however, mainly voluntary and would not lead to a new legal framework for hazardous waste.
- 87) Similarly, several ongoing projects aimed at establishing environmental monitoring capability cannot provide sustainable results in the absence of the proper regulatory framework.
- 88) The regulatory effort in Pakistan toward the implementation of the Stockholm Convention is also progressing at a relatively slow pace.
- 89) Therefore, in the absence of the project, these activities will generate only limited progress toward the implementation of the Stockholm convention and the establishment of sound management of POPs waste.
- 90) It is however evident that a great potential to boost the above objectives do exist in the country:
 - as explained in above in the situation analysis, a number of laboratories, equipped with state of the art analytical instruments which may be used for monitoring POPs and PCBs exist; some of these laboratories have experience in QA/QC. Similarly, highly skilled laboratory staff such as PARC and PCRWR and Pesticide Residue Labs whose knowledge may be upgraded with proper training, is available.
 - in at least one case, POPs chemicals were safely destroyed in the country in compliance with Stockholm convention requirements, and fulfilling EU emission standards for incineration (including the emission limit for PCDD/F <0.1ng TEQ/Nm³). This means that, experience on safe disposal of POPs may be available in the country.
 - The establishment of a National Focal Point at the Climate Change Division (under the Minister of Environment) in charge of the implementation of the Stockholm Convention, Rotterdam Convention and the Basel Convention, will ensure that the necessary amendment of laws to integrate the above convention will be carried out in an effective and coordinated way.

- As reported by the electric power companies interviewed during the project preparation activities, a greater attention is recently being paid by financial international agencies (ADB, WB) to ensure that the extension of the electrical capacity of the country is implemented in an environmentally safe way, with specific reference to the PCB issue.
- 91) The project will therefore built on the positive aspects to overcome the limitation and risks posed by the current baseline project.
 - 92) It is evident that the project will bring significant and catalytic beneficial effect, both at local and global scale. The safe disposal of a large amount of POPs pesticide will prevent their release in the environment, an event which is highly probable due to the improper storage and the climatic condition of the country; the upgrading to safety standard of the reclamation centers, and the disposal of PCBs equipment and oil will in turn prevent the exposure of workers and the release of PCB in the environment.
 - 93) Despite many years of efforts Government of Pakistan could not implement the pesticides related regulations due to lack of any sound enforcement mechanism. Moreover, follow up for implementation of these regulations has also been weak either due to lack of technical capacity or coordination among the relevant departments.
 - 94) The current project would address these challenges based also on the successful implementation of similar projects in other countries. In addition to this, the GEF support will also help in the introduction of environmentally sound disposal technologies.
 - 95) In the absence of project, the weak regulatory framework will be not properly amended and the environmental and health condition will be deteriorated increasing the number of POPs related diseases among people and depletion of the environmental conditions related to land, air and water.
 - 96) The project would primarily establish the roadmap and guiding principles for establishment of the regulatory framework, the know-how and financial mechanism for the environmental safe disposal of POPs pesticides and PCBs in the country by upgrading current facilities and building capacity.
 - 97) The project will therefore generate considerable environmental benefits to Pakistan and globally.
 - 98) With effective implementation of the project, the land, air and water resources that were earlier being contaminated due to POPs and PCBs uses in different ways will be protected. Secondly, it will level the ground for relevant institutions and line agencies of the Government of Pakistan to upgrade their existing facilities of disposal and build capacity of the human resources. The successful demonstration of disposal of 1200 tons of POPs and 300 tons of PCBs will motivate the government to dispose of remaining amount of these chemicals over the next phases.
 - 99) This reduction of POPs risk to the surrounding communities stands at the heart of the proposed project. Apart from neutralizing the POPs source, a considerable part of the project will focus on the education and risk reduction activities among the communities in the vicinity of the POPs storage after the main cause of contamination is being addressed.
 - 100) Without the project, the activities concerning POPs pesticide inventory and disposal and Environmentally Sound Management of PCBs will very likely face further delay. Under NIP, these activities (listed under the “Baseline Project” section of this project document) were originally due within the year 2012, but due to a number of reasons including the flood in 2010, and recent earthquakes these were not yet started.
 - 101) Without the technical and financial support brought by the project, even the lawmaking work needed to bring the environmental regulatory body compliant to the SC requirements will be delayed.
 - 102) In addition, as the main source of POPs pollution (namely, the storage of obsolete pesticides and the PCB contaminated equipment stored in the reclamation center) will be not removed, people and the environment will continue to be harmed by these contaminants.
 - 103) The project will bring obvious global environmental benefits through the destruction, in an environmentally sound manner, of 1200 tons of POPs pesticides and 300 tons of PCBs. In addition the project will establish capacity and infrastructures for the destruction of POPs and PCBs remaining in the country after project end.
 - 104) The upgrading of the existing legislation to ensure compliance with Stockholm convention requirements, and the increase training and awareness raising on POPs issue, will ensure continuity of action generating global environment benefits also after project closure.

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:

105) The following uncertainties and risks and relevant risk mitigation measures have been identified:

Risk		Risk Mitigation Measure
<p>Risks:</p> <p>1) Lack of coordination of the relevant institutions and ministries</p> <p>2) Conflicting objectives of different ministries / stakeholders which may render difficult the negotiation on an integrated regulation.</p> <p>3) Lack of commitment of relevant stakeholders.</p> <p>4) Timing and complexities of procedures for the examination, voting and adoption of new technical regulations.</p> <p>5) Provisions on import/export activities would require bilateral agreement with boundary countries which may be difficult to implement.</p> <p>6) Lack of commitment – capacity in drafting the Pakistan chemical profile.</p> <p>7) Training effectiveness limited or not properly assessed due to limited participation or limited quality control.</p>	L	<p>1) 2) and 3) Coordination and solution of conflicts among different stakeholders may be solved by involving them in the project steering committee and/or in specific project activities and establishing a well-staffed PMO for project management. A “POPs regulation coordination office” will be established at federal level which will interact with PMO and will coordinate with all governmental bodies involved in regulatory work.</p> <p>4) The selection of the proper procedure and type of regulatory instruments (i.e. decree instead of laws, or official guidance documents annexed to existing laws) for POPs – related legislation will ensure that regulation is adopted within project deadline.</p> <p>5) An international meeting with representatives of transboundary countries to clarify transboundary issues will be hold to discuss a common platform. It should be noticed that all the boundary countries (China, India, Iran, Afghanistan) ratified or accessed the Stockholm convention,</p> <p>6) Pakistan government is strongly motivated in providing information for drafting the country chemical profile. Technical assistance will be mobilized by the project, involving national and international expert with outstanding experience in chemical management, to ensure the successful completion of that task.</p> <p>7) To access 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</p>
<p>Risks:</p> <p>1) Stakeholders and interest groups not properly identified;</p> <p>2) Awareness and training program not properly targeted to the audience</p> <p>3) Enterprises may not be committed to send their personnel for training or workers not allowed / not willing to leave the job for the duration of the training.</p>	L	<p>1) A specific activity on stakeholder identification will be launched at project starting, with the support of known governmental, NGOs, and industrial stakeholders.</p> <p>2) Awareness and training programs will be based on the result of awareness and training gap analysis carried out by stakeholders.</p> <p>3) A ToT (Training of Trainers) approach for enterprises will be adopted to optimize time spent by workers and enterprises staff in attending training. Enterprises will appreciate how a better trained staff on POPs and safety at work will eventually imply a reduction in their liabilities and a better integration in the community.</p>
<p>Safety issues in some areas of Pakistan</p>	L	<p>The international and national staff conducting the activities will coordinate with UN-DSS for adopting the proper security countermeasures, depending on place and time. Only safe areas will be selected for the project</p>

Risk		Risk Mitigation Measure
		operations.
Governance weaknesses	L	e-governance approach and use of Information Communication Technologies (ICTs) to be promoted for effective and strengthened governance
Risks associated with climatic change issues. Risk of further release of POPs pesticides and PCBs as a result of floods.	M	Early identification and mapping of POPs stockpiles located in areas exposed to hydrological risk. The establishment of the capacity for POPs identification and disposal, as envisaged by the project, in Pakistan is even more urgent due to the sensitivity of the country to floods.
Overall Rating		L

A.7. Coordination with other relevant GEF financed initiatives

Currently there are no other ongoing GEF projects related to POPs in Pakistan. However, the project management structure will serve as initial task-force that may be used for coordinating / implementing other projects which are currently under preparation by UNDP in the area of POPs or chemicals. This will allow to preserve the valuable know-how which will accumulate by the local project staff during project implementation.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

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

- 106) The main beneficiaries of the project activities are the general public, consumers and communities which may be exposed to chemicals (POPs pesticides and PCBs) which may be released into the environment. It has to be highlighted once more that, due to the increased risk of floods resulting from climate change, the POPs stockpiles located in areas subjected to floods may be easily dispersed in the environment, adding to the natural disasters in the form of a chemical accident. Therefore there is the urgent need to address this issue that may be well considered as the last call to realize for Pakistan, because of the fact that almost no action to prevent the release to the environment of PCBs and POPs pesticides are currently in place.
- 107) 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 not only benefit human health and the environment but also the pesticides distribution networks including the pesticide dealers and their subsidiaries. The project will raise awareness and knowledge also in the distribution network, which will be therefore able to provide safer handling of the pesticides among those who are involved in the distribution and more advanced chemical products and better services to the customers.
- 108) As there is not yet a well-established system for hazardous waste management in Pakistan, the upgrading of facilities for disposing of hazardous waste and industrial waste also represent not only a benefit for the environment and human health, but again a development opportunity. Obviously, no such system may be sustainable if the relevant legislation is not in place and enforced.
- 109) In the perspective of a sound enforcement of the requirements of the Stockholm Convention on PCBs, the electric industry will also benefit from any activity brought by the project in the field of PCB inventory, management and disposal. The electric power companies are also beneficiaries and interested stakeholders, as they will receive benefit in terms of technical assistance and – being among the addressee of the regulatory tools to be developed under the project - will have the opportunity to

have their views and needs considered in the course of law making activities related to the implementation of the Stockholm Convention.

- 110) On the governmental side, the main stakeholder of the project is the Climate Change Division (CCD), which is in-charge of the state management of the environmental protection, as well as setting national environmental quality standards, environmental monitoring, remediation and prevention; CCD is the focal point for the implementation of several international conventions including the Stockholm Convention, the Basel Convention, Montreal Protocol, the Minamata convention on mercury.
- 111) The Ministry of National Food Security and Research is in-charge of food security and research, management of agricultural land and regulating agrochemicals. With PARC (Pakistan Agricultural Research Council) and NARC (National Agricultural Research Center), it conducts research and monitoring activities on chemical residue in food, water, and the environment.
- 112) In addition to the above, in the table below the list of the main governmental stakeholders of the project, with their respective roles, is reported.

Government Agencies	Key function and mandate	Common responsibility and duties
Climate change division	National focal point of the Stockholm, Basel, and Rotterdam convention National focal point for the Kyoto protocol National focal point of the Minamata convention. State management of environment, climate change, etc. Environmental prevention and control, remediation of environmental incidents and degradation, etc. Hazardous waste and POP stockpile & contaminated site management Lead and coordinate with other ministries to prepare national chemical lists of prohibited, restricted and conditional chemicals; list of declaration chemicals; list of hazardous chemicals required to prepare emergency and preparedness plans; list of chemicals prohibited to use in household and consumer products	Draft laws, resolution, decree, national target programs, etc. to be submitted to the Government for approval Issue circular, decisions, direction, guidelines, federal technical regulations, and other legal documents under each ministry's jurisdiction
Ministry of National Food Security and Research	State management of agriculture, food, rural development including pesticides and veterinary medicine used in the above areas; safety of agricultural and food products; food security Direct implementation of state management of food safety regarding agricultural and sea – products National focal point for Rotterdam Convention on pesticides??	Lead, instruct and organize implementation of legal documents, strategies, plans, national target plans, etc.
MOH	It is a branch of the Government, which is the department for provision of medical services, responsible to frame the health policies and to enforce the same at the national level. Responsible for the Pakistan Health system	
PARC and NARC	Pakistan Agricultural Research Council (PARC) is the apex national organization working in close collaboration with other federal provincial institutions in the country to provide science based solutions to agriculture of Pakistan through its statutory functions. National Agricultural Research Centre (NARC), Islamabad established in 1984, is the largest research centre of the Pakistan Agricultural Research Council (PARC). Physical facilities in term of experimental fields, laboratories, green houses, gene bank, library/ documentation, auditorium, machinery & lab equipment repair workshops, are also available at NARC.	PARC undertake, aid, promote and coordinate agricultural research, perform high level training, manage information relating to agriculture NARC coordinated programmes serve as a common platform for the

		scientists working in different federal, provincial agricultural research, and academic institutions to jointly plan their research activities.
LABORATORIES NARC Eco-toxicological Lab, PCRWR, Kala Shah Kaku Pesticides Residue Labs and PPD Pesticides Lab Karachi	As the list of laboratories already mentioned	Providing services for chemical analysis, capacity building of partners and dissemination of relevant info and knowledge
Electrical Power Companies (*)	Electrical power companies, both at the generation and distribution side, are the most relevant stakeholders of the PCB issue, as these will have to comply with the obligation related to identification, labeling and phase out of PCBs containing equipment	In charge of generating and distributing electric energy

(*) for instance the Islamabad Electric Supply Company (IESCO), Lahore Electric Supply Company (LESCO); Gujranwala Electric Supply Company (GESCO); Peshawar Electric Supply Company (PESCO), Quetta Electric Supply Company (QESCO), Multan Electric Supply Company (MESCO); Faisalabad Electric Supply Company (FESCO); Sukkur Electric Supply Company (SESCO), Tribal Electric Supply Company (TESCO), Karachi Electric Supply Company (KESC), Hyderabad Electric Supply Company (HESCO).

- 113) It is evident as long as the legislation and enforcement are missing, there will be no commitment from the industry to ensure environmental compliance. This is particularly relevant to the following sectors:
 Owners of POPs stockpile storage facilities: the greatest storage facilities of POPs and obsolete pesticides are currently owned by the Plant Protection Department and also by some of the provincial agricultural extension departments such as Sindh and Punjab particularly. POPs storages are also run by private pesticide dealers. In the absence of specific enforcement on management disposal of hazardous waste, and of sound technological options, these stockpiles are left in that storage sites without any substantial countermeasure to prevent dispersion in the environment.
- 114) Owners of equipment potentially contaminated by PCB. As a specific regulation on PCBs management is lacking, the owners of PCB contaminated equipment feel no obligation to check whether their equipment may be PCB contaminated and – even more – to have that PCB equipment disposed or treated. Indeed PCB containing equipment continue to be dismantled and sold without any control of the PCB content.
- 115) Through this project, is therefore very important to establish a collaborative environment where DISCOs could smoothly work with the project implementing and executing partners for carrying out at least the most important activities related to the upgrade of transformers storage and maintenance, as well as PCB transformers disposal. The project will therefore remove the barriers a) to d) by strengthening the pre-conditions for ensuring commitment and sustainability from the relevant stakeholders, which are:
- 116) Improving the regulatory framework (Component 1 of the project). That will envisage at the same time the drafting of relevant provisions, which may take the form of secondary law (regulation, rules), downstream to the main laws (NEC-2005, PEPA 1997 and Hazardous Substances Rules 2003); and the development of suitable enforcement and control capacity either at central or provincial level.

- 117) In addition to the work on improving legislation, the project will activate two very important drivers:
- 118) A raised awareness not only of the stakeholders that may be addressed by the new legislation, but also of the public at large as a whole. Awareness is the main driver toward the development and enforcement of proper regulatory instruments. All the activity of awareness raising will take in due consideration the specific need to address gender issues related to the impact and low awareness on POPs.
- 119) Cost effective measures for reducing exposure (for consumers and workplace). This because, to be effective, awareness raising on POPs need always to be complemented, or even anticipated by the proper answers and actions to reduce risk.
- 120) Only once this system of regulatory improvement, enforcement, and awareness on POPs is established then the sustainability of concrete project activities can be ensured. Therefore it is expected that the activities on POPs disposal / treatment will start under a framework of improved regulation and awareness of the POPs issue.

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 (LDCE/SCCF):

- 121)The project mainly deals with reduction of release of and exposure to POPs and 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 the sectors which are currently generating or emitting POPs; 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.
- 122)The net economic benefit for the country is therefore the difference between the increased cost for POPs generator of holder and the reduced cost for the country and the population at large.
- 123)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.
- 124)In Pakistan, 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, the communities are currently bearing the cost of PCB environmental hazard.
- 125)The same is for re-seller of POPs or obsolete pesticides, which instead of properly store or disposing these harmful substance, get an economical benefit from the placing on the market of substances which otherwise should have been disposes.
- 126)The project intend to implement and enforce the Stockholm Convention which will force all the generator or owners of POPs to internalize the associated environmental cost by adopting relevant provision on POPs into existing or new legislation; at the same time, the project will provide initial technical and economic assistance to the stakeholders (PCB owners, owners of POPs pesticide stockpiles and storage area) by treating the high priority stockpiles of POPs and PCBs and by bringing technical solution which eventually will become a relevant further business sector in a country which is in urgent needs of sound disposal technologies.
- 127)It is easy to understand what is the social and economical benefit of this action:
- 128)On one side there could be an increased management cost for specific industrial sector, which will however initially reduced by the technical and economic assistance provide by the project, and subsequently could represent a significant source of income coming from the technological upgrade of waste management capability;
- 129)On the other side there will be significant social benefits in term of reduced rate of disease including cancer, and improved quality of life.
- 130)In addition, by carrying out an intensive activity on training and awareness raising, the project will create the demand for a free-POPs environment and will provide sensitive population (the persons with the greatest risk to be exposed to POPs, both at workplace and at home) with simple and cost-effective methodologies to reduce their exposure to POPs. This is specifically true for women which may be exposed to POPs following specific ways like the use of obsolete pesticide in agricultural activities, the use of recycled pesticide

container, the use of recycled oil, the exposure to POPs contaminated clothes like work suits improperly brought to home.

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

131) 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.

C. DESCRIBE THE BUDGETED M & E PLAN:

The project will be monitored through the following M& E activities.

Project start:

132) A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

The Inception Workshop should address a number of key issues including:

- Assist all partners to fully understand and take ownership of the project. Details the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis à vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
- Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- Discuss financial reporting procedures and obligations, and arrangements for annual audit.
- Plan and schedule Project Board meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first Project Board meeting should be held within the first 12 months following the inception workshop.
- An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

Quarterly:

133) Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.

134) Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).

- 135)Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- 136)Other ATLAS logs can be used to monitor issues, lessons learned etc... The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annually:

137)Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR covers both the UNDP and GEF reporting requirements.

138)The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual).
- Lessons learned/good practice.
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS QPR
- Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

Periodic Monitoring through site visits:

139)UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

Mid-term of project cycle:

140)The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation sometime in 2017. The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final 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 the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC).

141)The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

End of Project:

142)An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

- 143)The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC).
- 144)The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.
- 145)During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Learning and knowledge sharing:

- 146)Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.
- 147)The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.
- 148)Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

Communications and visibility requirements:

- 149)Full compliance is required with UNDP's Branding Guidelines. These can be accessed at <http://intra.undp.org/coa/branding.shtml>, and specific guidelines on UNDP logo use can be accessed at: <http://intra.undp.org/branding/useOfLogo.html>. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: http://www.thegef.org/gef/GEF_logo. The UNDP logo can be accessed at <http://intra.undp.org/coa/branding.shtml>.
- 150)Full compliance is also required with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"). The GEF Guidelines can be accessed at: http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf. Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.
- 151)Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

M& E workplan and budget

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO, UNDP GEF 	Indicative cost: 20,000	Within first two months of project start up
Measurement of Means of Verification of project results.	<ul style="list-style-type: none"> ▪ UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members. 	To be finalized in Inception Phase and Workshop. Indicative cost: 30,000	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	<ul style="list-style-type: none"> ▪ Oversight by Project Manager ▪ Project team 	To be determined as part of the Annual Work Plan's preparation. Indicative cost: 30,000	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG 	None	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> ▪ Project manager and team 	Indicative cost: 30000	Quarterly
Mid-term Evaluation	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost: 60,000	At the mid-point of project implementation.
Final Evaluation	<ul style="list-style-type: none"> ▪ Project manager and team, ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost : 60,000	At least three months before the end of project implementation
Project Terminal Report	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ local consultant 	Indicative cost: 35,000	At least three months before the end of the project
Audit	<ul style="list-style-type: none"> ▪ UNDP CO ▪ Project manager and team 	Indicative cost: 35,000	Yearly
Visits to field sites	<ul style="list-style-type: none"> ▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives 	For GEF supported projects, paid from IA fees and operational budget	Yearly
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		US\$ 300,000 (+/- 5% of total budget)	


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. Kamran Ali Qureshi	Additional Secretary- GEF Focal Point	MINISTRY OF ENVRIONMNET	02/25/2011

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 CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Ms. Adriana Dinu UNDP-GEF Executive Coordinator and Director a.i.		30/06/2014	Mr. Jacques Van Engel	+1 (212) 906-5782	jacques.van.engel@undp.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).

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
Project Objective: Reducing human health and environmental risks by enhancing management capacities and disposal of POPs in Pakistan	<p>Extent to which provisions on POPs comprehensively integrated into the regulation on chemicals, waste, environmental targets. Comprehensive regulation, clean up targets, and guidance on POPs contaminated sites in place and tested on a number of contaminated sites.</p> <p>Extent to which awareness on POPs of relevant stakeholders measurably enhanced.</p> <p>Extent to which capacity of local communities and public and private sector stakeholders to reduce exposure to POPs and their releases enhanced.</p> <p>Percentage increase in tons of POPs pesticide stockpiles and PCBs properly</p>	<p>The integration of SC requirement on POPs in the existing regulation is very limited.</p> <p>A harmonized regulatory system aimed at reducing release of, and exposure to POPs and hazardous chemicals is still missing.</p> <p>Awareness of institutional and industrial stakeholders, as well as the general public is low.</p> <p>POPs pesticide stockpile and PCB contaminated equipment are unsafely stored and often dispersed in the environment as a result of floods.</p> <p>Capacity and infrastructures for the management and disposal of POPs stockpiles and PCBs is missing.</p>	<p>Existing regulation on chemical management updated and enforced with provisions related to POPs</p> <p>An integrated system for enforcing and controlling proper management of POPs, both ad administration and industrial sectors adopted</p> <p>A comprehensive package of regulations and guidance for POPs reduction and disposal, permitting of disposal facilities, PCB inventory and treatment established.</p> <p>Management capacity of governmental and industrial stakeholders increased.</p> <p>Awareness of relevant stakeholders at all level is significantly enhanced,</p> <p>At least 1200 tons of POPs pesticide and 300 tons of PCBs contaminated equipment safely collected, stored and disposed off.</p>	<p>Project reports and documentation.</p> <p>Official acts related to the promulgation of new / amended laws.</p> <p>Training reports</p> <p>Workshop – meeting minutes.</p> <p>Hazardous Waste Manifests</p> <p>Site surveys</p> <p>Interview and questionnaires.</p>	<p>Risks:</p> <p>Regulatory authorities not committed to issue new regulation.</p> <p>POPs stockpile and PCBs not timely identified are released in the environment.</p> <p>Technology for disposing POPs and PCBs not timely established.</p> <p>Assumptions.</p> <p>Inventory of POPs and PCBs already started at PPG stage, and is the first and most urgent project activity.</p> <p>The GoP is highly committed to establish a modern environmental regulation implementing in a sustainable way the SC provisions.</p> <p>The project will follow a double approach for disposal of POPs, which will ensure that, in case a domestic disposal technology cannot be identified, POPs can be still send abroad for disposal in compliance with the Basel convention.</p>

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
	managed and disposed off				
Component 1. Development and implementation of a Regulatory, Policy and enforcement system to reduce POPs releases					
Outcome .1.1. strengthened POPs regulatory and policy instruments adopted and POPs management systems for controlling and reducing releases of POPs functional	Number of regulatory tools relevant to the management of POPs including PCBs, hazardous waste pesticides, release and emission limits for disposal facilities, analyzed, revised and amended to consistently take into account SC provisions on POPs.	The initial POPs pesticides as included in the Stockholm Convention before 2009 are banned in Pakistan, through the Agricultural Pesticides Ordinance, 1971. New POPs like PFOs and brominated flame retardants are not regulated in Pakistan A PCBs regulation is completely missing. Regulation on U-POP emission is not compliant with the SC BAT/BEP	Key POPs related national legislation developed. National Technical POPs management Guidelines developed.	Gap analysis report of the current regulatory system with SC Meeting minutes. Text of new or amended regulation. Text of enforcement rules for management of POPs. Interview, site visit, questionnaire with relevant stakeholders	Risks: 1) Lack of coordination of the relevant institutions and ministries 2) Conflicting objectives of different ministries / stakeholders which may render difficult the negotiation on an integrated regulation. 3) Lack of commitment of relevant stakeholders. 4) Timing and complexities of procedures for the examination, voting and adoption of new technical regulations. 5) Provisions on import/export activities would require bilateral agreement with boundary countries which may be difficult to implement. 6) Lack of commitment – capacity in drafting the Pakistan chemical profile. 7) Training effectiveness limited or not properly assessed due to limited participation or limited quality control.
Outcome 1.2 Government enforcement agencies and other organizations involved in regulating POPs management are able to use tools developed for POPs management and network with/regulate main agencies handling POPs.	Number of national Technical POPs management Guidelines compliant with SC developed and effectively implemented. Number of management and enforcement staff at national and provincial level in at least 4 provinces have enhanced	Inadequate specialized skills, financial resources, equipment and working tools by respective institutions dealing with POPs; Lack of dedicated administrative structure.	60 staff from central and provincial level administration trained on enforcement of POPs related provisions. Guidance / circulars on PCB identification, inventory labelling and disposal issued; Guidance / circulars on obsolete pesticides including POPs identification, inventory and disposal issued; Guidance for import / export of POPs containing materials and goods.	Text of adopted administrative procedures and circulars establishing POPs management at central and provincial level. Training material, training minutes, outcome of pre and post assessment of the participants.	Assumptions/countermeasures: 1) 2) and 3) Coordination and solution of conflicts among different stakeholders may be solved by involving them in the project steering committee and/or in specific project activities and establishing a well-staffed PMO for project management. A “POPs regulation coordination office” will be established at federal level which will interact with PMU and will coordinate with all governmental bodies involved in regulatory work. 4) The selection of the proper

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
	skills/capacities on POPs management and enforcement.				procedure and type of regulatory instruments (i.e. decree instead of laws, or official guidance documents annexed to existing laws) for POPs – related legislation will ensure that regulation is adopted within project deadline.
Outcome 1.3. Governance and enforcement particularly on illegal imports framework for controlling POPs improved.	<p>Number of main custom offices out of the total number which have adopted procedures and circulars establishing POPs management.</p> <p>Number of officers from all the main customs successfully trained.</p>	<p>Inadequate awareness of importers and custom officers on imports requirements;</p> <p>Inadequate POPs inspectorate services</p> <p>Lack of control on the export of PCB content of end of life electrical equipment</p>	<p>Procedures, responsibilities and offices for the enforcement of provisions related to import/exports of POPs substances or POPs containing or contaminated articles established.</p> <p>Custom officers and managers trained on POPs issues and strategies.</p> <p>All the main customs in Pakistan have adopted procedures and circulars establishing POPs management.</p>	<p>Text of adopted administrative procedures and circulars establishing POPs management for custom officers.</p> <p>Training material, training minutes, outcome of pre and post assessment of the participants.</p>	<p>6) An international meeting with representatives of boundary countries to clarify transboundary issues will be hold to discuss a common platform. It should be noticed that all the boundary countries (China, India, Iran, Afghanistan) ratified or accessed the Stockholm convention,</p> <p>7) Pakistan government is strongly motivated in providing information for drafting the country chemical profile. Technical assistance will be mobilised by the project, involving national and international expert with outstanding experience in chemical management, to ensure the successful completion of that task.</p> <p>8) To access 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 (identify). The above will ensure at the same time willingness to attend training course and quality/effectiveness of the training</p>
Outcome 1.4. Comprehensive National Chemicals Profile improved and	Availability of an updated chemical profile report for Pakistan.	A chemical profile for the country was completed in 2009 by the International	Data compilation and elaboration of an updated Chemicals Profile for Pakistan with special reference to 1) priority concerns	. Update chemical profile report – preliminary and final draft	Risk: Upgrading of Chemical profile not fully taking into account changes

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
updated with enhanced steps taken for better respnse		Cooperation Wing of the former Ministry of Environment. The chemical profile includes description of the chemical management in the country, including regulatory framework and management of hazardous waste, which will obviously need to be updated as a result of the activity of the project	related to chemicals in all stages of their Life Cycles 2) Legal Instruments and institutional framework 3) Chemical Emergency preparedness 4) Management of POPs 5) Disposal capacity for PCBs and POPs.		Assumption Enough data on chemical management will be made available at starting of the project and further data will be generated in the course of project implementation. The expert involved in drafting of chemical profile have significant experience on the matter
Component 2. Capacity building of local communities and public and private sector stakeholders to reduce exposure to and releases of POPs					
Outcome 2.1. Stakeholder groups aware of sources and prepared to mitigate POPs exposure and releases.	Number of institutes and communities receiving effective Training on POPs exposure Percentage increase in the level of awareness of main private and public stakeholders, on cost effective POPs exposure, POPs release reduction and alternative to POPs	Poor information exchange and data keeping; Inadequate resources for dissemination of information on the viable POPs alternatives Lacking of information and procedures for preventing exposure to and release of POPs	Development of awareness and training programs of sources and cost-effective POPs exposure and release reduction steps as well as alternatives to POPs. Professional and community level training sessions on POPs exposure mainly for PCBs and release undertaken as well as risks with unauthorized products reduction covering 30 institutes and 50 communities. Training of PCB holders in safe PCB handling during maintenance	Interview and questionnaires. Raising awareness materials and documents. Material and minutes of the awareness workshops. Training material, training minute, outcome of pre and post assessment of the participants	Risks: 1) Stakeholders and interest groups not properly identified; 2) Awareness and training program not properly targeted to the audience 3) Training effectiveness limited or not properly assessed due to limited participation or limited quality control. 4) Enterprises may be not committed to send their personnel for training or workers not allowed / not willing to leave the job for the duration of the training. Assumptions/countermeasures: 1) A specific activity on stakeholder identification will be launched at project starting, with the support of known governmental, NGOs, and industrial stakeholders. 2) Awareness and training programs will be based on the result of awareness and training gap analysis
Outcome 2.2 Cost effective POPs exposure mitigation undertaken focusing mainly on PCBs.	Number of people successfully trained for each relevant sector. Percentage of	Lack of guidelines on risk minimization procedures for handling, transportation, storage and	Specific guidance documents developed and training for PCB holders in safe PCB handling during maintenance undertaken, At least 50 people from the power generating and distribution sectors	Interview and questionnaires. Guidance documents for PCB owners. Training material,	

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
	people have enhanced post-training skills for safe PCB handling during maintenance.	disposal of PCB contaminated equipment. Lack of adequate legal provision for monitoring of POPs release and their effects to human environment; There are no legal provisions focusing on PCBs management	and 50 people from large electricity consumption factories which are owners of potentially PCB contaminated equipment trained	training minute, outcome of pre and post assessment of the participants	carried out by stakeholders. 3) To access the training sessions, candidate will have to pass an initial test which will serve 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 implementing and executing agency The above will ensure at the same time willingness to attend training course and quality/effectiveness of the training
Outcome 2.3. Awareness on POPs pesticides among key target groups, such as decision makers, high/risk occupations etc. raised.	Number of institutes and communities effectively trained. Percentage of women with enhanced awareness on POPs	Lack of awareness, both for the public at large, decision makers or farmers, on public awareness on health and environmental risks associated with POP pesticides.	At least 30 institutes and 50 communities in relevant areas (agriculture intensive, manufacturing districts, power sector, waste management) trained on pesticidal POPs and their toxicology features, POPs exposure scenario, alternatives to POPs and POPs-free technologies including a specific training activity for addressing gender issue, carried out.	Interviews, questionnaires, Training material, training minutes, outcome of pre and post assessment of the participants-	4) A ToT (Training of Trainers) approach for enterprises will be adopted to optimize time spent by workers and enterprises staff in attending training. 5) Enterprises will appreciate how a better trained staff on POPs and safety at work will eventually imply a reduction in their liabilities and a better integration in the community.
Outcome 2.4 Reduced POPs exposure in occupational setting.	Number of specific industrial sector for which training on POPs has been effectively delivered. Extent to which industries have integrated POPs issues adopted into their management and supervision structure.	Inadequate resources to support preparation and execution of training and awareness raising program. Lack of knowledge on safety at workplace, risk reduction, use of PPE in most industries.	Guidance for exposure reduction to POPs in priority areas, including non-occupational exposure and gender-related exposure developed. Operators from at least 5 specific industrial sectors (waste management and recycling, textile manufacturing, electric power sector, agriculture, iron and steel, ship-breaking, plastic) and control authorities trained on POPs reduction, BAT/BEP, PPE At least 5 industries and control	Interviews, questionnaires, Training material, training minutes, outcome of pre and post assessment of the participants-	

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
			authorities have integrated POPs issues into their management and supervision structures A specific training activity for women addressing POPs issue implemented		
Component 3.Collection, Transport and Disposal of PCBs and POPS Pesticides					
Outcome 3.1.Capacity to undertake POPs disposal projects at provincial level established.	<p>Percentage of inventory of POPs stockpiles mapped and digitised</p> <p>Number of electrical equipment tested for PCB.</p> <p>Extent to which training on sampling, analysis and labelling of PCB contaminated equipment has been effective</p> <p>Number of PCB storage and dismantling facilities effectively upgraded.</p>	<p>The National Implementation Plan (NIP) for POPs, inventories approximately 6,031 MT of obsolete stocks of POPs pesticides in 430 identified sites. Of these 3,800 MT are in Punjab, 2,016 MT in Sindh, 48 MT in KPK, 135 MT in Balochistan, 31.5 MT in AJK and 0.5 MT in Northern Areas of Pakistan</p> <p>A PCB inventory is missing. Storage facilities are not safe and POPs may be easily released in the environment.</p> <p>Dismantling facilities for PCBs do not currently envisage any procedure or equipment for the safe dismantling and decontamination of</p>	<p>National Inventory of POPs stockpile upgraded, including map for identifying priority sites Storages upgraded and logistic plan developed Pilot inventory of PCBs (testing of at least 5000 equipment) carried out in one Province At least 2 PCB storage and dismantling facility upgraded.</p>	<p>Preliminary and final inventory of POPs pesticide stockpile and contaminated sites. List of POPs temporary storage sites. PCB pilot inventory with analytical reports List of PCB storage facilities. Logistic plan for transportation of POPs Plan and technical design for POPs storage upgrade.</p>	<p>Risks</p> <ol style="list-style-type: none"> 1) Lack of coordination of the relevant provincial and national institutions 2) Conflicting objectives of different authorities involved in waste regulation 3) Lack of commitment of relevant stakeholders. 4) Difficulties related to the inventory of POPs stockpiles and PCB contaminated equipment. 5) Limited availability of suitable sites for storage of POPs stockpile and PCBs 6) Technologies for POPs disposal not available in the country / available technologies not suitable. <p>Assumptions/countermeasures:</p> <ol style="list-style-type: none"> 1) Coordination with provincial authorities will be ensured by ensuring these are represented in the project steering committees. 2) Possible conflicts among different ministries' objectives will be solved by

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
		PCB contaminated equipment.			continuous interchange of information in the course of project implementation by holding meeting and workshops as frequently as necessary.
Outcome 3.2: Environmentally safe disposal of particularly risky POPs stockpiles and the sound disposal of up 1500 tonnes of POPS Pesticides and PCBs	Amount of POPs pesticide disposed off in an environmentally safe way. Amount of PCBs disposed off in an environmentally safe way	Currently the greatest part of POPs stockpiles and PCBs are not managed in an environmentally safe way. No disposal facility in Pakistan has been officially tested for disposing POPs waste. Disposal of obsolete pesticides has been carried out in compliance with EU BAT/BEP regulation by cement kiln incineration at Lafarge cement plan	Identification, procurement and testing of disposal facilities or services. Up to 1200 tons of obsolete POPs stockpile from Punjab and Sindh province safely disposed. Up to 300 tons PCB equipment safely disposed.	Proof of Performance plan and reports for POPs disposal technology. Proof of performance test reports, supervision mission reports. Hazardous waste manifests and disposal certificates for POPs stockpiles. Hazardous waste manifests and disposal certificates for PCBs. Analytical reports for PCBs contaminated oil before and after treatment.	3) All the stakeholders will be clearly informed about the environmental, social, health and economic benefit brought by the project to secure their willingness to participate. 4) To ensure that PCB inventory will be effective, early involvement of potential PCB owners will be established at project inception. 5) To ensure a reliable inventory of POPs stockpile, the Pakistan Agricultural Research Council as well as the relevant provincial institutions will be involved. 6) A shortlist of suitable sites for PCB and POPs stockpile storage will be identified early with the involvement of (industrial project partner, ministries, and local authorities). These sites will be carefully assessed for their environmental impact including issues related to hydraulic risks. Based on cost/effectiveness consideration either proven disposal technologies for PCBs and or POPs contaminated material will be set up in Pakistan, or the POPs contaminated material will be set abroad for disposal, in compliance with the relevant requirements of the Stockholm convention.
Outcome 3.3. National POPs management and disposal scheme and replication plan developed.	Existence of National POPs management and Disposal Plan with detailed plans on 1. National scheme for POPs pesticide disposal 2. Management plan for PCBs	The action plans for pesticidal POPs disposal and PCBs management established in the NIP have not been implemented yet.	National scheme for POPs disposal as a part of hazardous waste management scheme developed. Nationwide PCB management strategy developed	List of offices and personnel in charge of POPs management. Workshop and meeting minutes and reports.	

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
					In case of establishment of disposal technologies in Pakistan, or of use of technologies available in the country, Proof of Performance tests with conditions and material representative of the waste to be destroyed will be carried out prior to start the disposal activities

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).

The STAP comments on the PIF	Response
<p>(i) In the description of socioeconomic benefits (including gender) that are envisioned to emanate from the project, more detail is given on the use of the rapid assessment process, and ensuring relief to local communities. Local stakeholder consultation and participation are cited as integral to the project. However, there is no clear mechanism to address gender, especially when one considers that women (and children) are often deeply involved in agriculture, but are also not given a large voice in public discourse. In some areas, it may be problematic for men and women to participate in capacity building/awareness activities together due to cultural sensitivities. Therefore it would seem that there needs to be consideration of the necessity/utility of gender specific targeting of activities.</p>	<p>This aspect will be specifically addressed in component 2 of the project, envisaging specific training and raising awareness activities specifically designed to address gender issues. See also the section “Addressing gender issues with specific reference to impact of POPs and lacking of awareness.”</p>
<p>(ii) The dangers of informal, repurposed use of POPs containing containers should be included in any targeted awareness in communities. There may be a large gender component to this (e.g. if women do water collection and other gathering of food etc. using repurposed containers).</p>	<p>This aspect will be specifically addressed in component 2 of the project, envisaging specific training and raising awareness activities specifically designed to address gender issues.</p>
<p>(iii) It is hoped that attention will also be paid to the handling of residuals from disposal processes. In developing the project document, and determining disposal options, there should be a clear attempt to incorporate the Stockholm/Basel and GEF guidance on technology selection for POPs disposal and the overall development of the ESM system for PCBs and pesticides. This would ensure that a comprehensive set of parameters be used to select technologies for GEF investment (e.g. environmental performance, ability to manage residuals and transformation products of the destruction and decontamination processes, full assessment of pre-treatment steps required and attendant associated risks, and required resources and capacities to manage them). A more explicit following of the aforementioned scientific guidelines would be desirable in the course of project development and implementation, and would also ensure that the true costs of a technology are brought to light since pre-destruction steps (e.g. characterization of the PCB congeners to be handled, prioritization, capture and transport, containment and pre-treatment) can carry their own significant resource and capacity burdens, and can often be the barrier to implementation of technologies in developing countries and CEITs. Definition of environmentally safe low POPs concentrations would also be clearer and kept consistent with best practices.</p>	<p>This issue is specifically addressed in the section “Compliance with the BAT/BEP guidance established under the Stockholm Convention and the Basel Convention for the disposal of POPs”. Criteria for technology selection encompassing compliance with BAT/BEP, DE and DRE, process reliability, economic sustainability will be adopted at any stage of technology procurement and testing, not only for disposal technologies but also for storage, pre-treatment, transportation, and processing of residues.</p>
<p>(iv) It is not clear how the disposal will be done. Provision needs to be built into the project to manage the amounts in a way that will be sustainable beyond the duration of the project.</p>	<p>Identification of disposal options have been one of the main PPG task. This is explained in detail under section “Strategy” subsections “Option 1 and Option 2”.</p>
<p>(v) The current POPs stockpile (PCBs and pesticides) in Pakistan seems to be particularly large. Combined with the country's susceptibility towards natural disasters and associated sensitive rural and urban populations, the present threat towards human health and the environment seems to be quite high. STAP strongly supports the intention of the project map high priority regions and sites, and would like to see this activity expanded to a national level. Such an activity would identify areas and issues for further urgent intervention to reduce the immediate threats and thereby update the current NIP.</p>	<p>Priority mapping of pesticidal POPs stockpiles. will be one of the key project outputs and will be carried out under output 3.1</p>

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:			
<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>
International Consultant	30,000	20,888.00	9,112.00
Local Consultants	30,000	9,366.57	20,633.43
Travel (Workshops & Other)	8,000	4393.07	3,511.04
Miscellaneous – UPL, Stationary, Postage etc.	7,000	7,095.89	0
Total	75,000	41,743.53	33,256.47

⁵ If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

NA