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United Nations Development Programme

Country: Pakistan

PROJECT DOCUMENT¹

Project Title : Comprehensive reduction and elimination of Persistent Organic Pollutants in Pakistan

UNDP Strategic Plan Environment and Sustainable Development Primary Outcome:

Outcome1: Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded

Outcome 1.3: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals and waste

UNDP Strategic Plan Secondary Outcome: NA

Expected CP / ONE PLAN Outcome(s):

Strategic Priority Area: Increased national resilience to disasters, crises and external shocks

ONE PLAN II Outcome 3: Increased national resilience to disasters, crises and external shocks.

Expected Country Programme (CP) SPA 3: Increased national resilience to disasters, crises and external shocks.

CP Outcomes : Economic growth takes into account environmental protection and rational use of natural resources for poverty reduction

Expected CPAP/ONE PLAN Output (s):

Expected ONE PLAN II Outputs 3.2: Vulnerable populations benefit from improved sustainable environmental management practices including climate change mitigation & adaptation

Expected CP outputs: strengthen capacities of national, provincial and district DRM institutions through establishment of early warning, multi hazard mapping, planning and management systems that integrate gender equality, women's empowerment and community-based disaster risk management.

Executing Entity/Implementing Partner: Climate Change Division, Cabinet Secretariat

Implementing Entity/Responsible Partners: UNDP

¹ For UNDP supported GEF funded projects as this includes GEF-specific requirements

Brief Description Objectives of this project are reducing human health and environmental risks by enhancing management capacities and disposal of POPs in Pakistan through: i) the development and implementation of a regulatory, policy and enforcement system to reduce POPs releases and to regulate POPs waste disposal; ii) capacity building to reduce exposure to and releases of POPs; iii) collection, transport and disposal of 300t of PCB and 1200t of POPS Pesticides .The elimination of POPs pesticide stockpiles became even more urgent after the 2010 floods which damaged some of the storage sites of hazardous chemicals and pesticides. To ensure environmentally sound disposal of POPs, a facility to be upgraded, tested and permitted in compliance with Stockholm Convention BAT/BEP. As an alternative, the project will however keep open the option of shipment of POPs waste abroad for disposal, in compliance with the Basel Convention, if at an early stage it will result evident that the POPs cannot be disposed of using the technologies available in the country.

Programme Period:	60 months	Total resources required:	USD39,384,822
Atlas Award ID:	00081936	Total allocated resources:	
Project ID:	00091045	• GEF	USD 5,150,000
PIMS #:	4600	• Co-financing	USD34,234,822
Start date:	January 2015	o Government	USD11,570,000
End Date:	December 2019	o UNDP	USD 300,000
		o Private Sector	USD 22,364,822
Management Arrangements:	National Execution (NIM)		
PAC Meeting Date:	30 April 2014		

Agreed by (Government):

Date/Month/Year

Agreed by (Executing Entity/Implementing Partner):

Date/Month/Year

Agreed by (UNDP):

Date/Month/Year

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List of Acronyms

APR	Annual Progress Report / Annual Project Review
AWP	Annual Work Plan
CO	Country Office
EIA	Environmental Impact Assessment
FSP	Full Size Project (GEF terminology)
GEF	Global Environment Facility
GoP	Government of Pakistan
IP	national Implementing Partner
IR	Inception Report
I-TEQ	Internationally agreed TEQ - 1 g TCDD equals 1 g I-TEQ
IW	Inception Workshop
NIP	National Implementation Plan (re Stockholm Convention on POPs)
NPD	National Project Director
PCBs	Polychlorinated biphenyls
PIF	Project Identification Form (GEF terminology)
PIR	Project Implementation Review (annual GEF requirement)
PM	Project Manager
PMU	Project Management Unit (PMU)
POPs	Persistent Organic Pollutants
SC	Stockholm Convention on POPs
SRF	Strategic Results Framework
STAP	Scientific and Technical Advisory Panel (to GEF)
TTR	Terminal Tripartite Review
UNDP	United Nations Development Programme
UNDP-CO	United Nations Development Programme Country Office
USD	United States Dollar

I. SITUATION ANALYSIS

Context and global significance

Country Context

Pakistan is located at the crossroads of South Asia, Central Asia, China and the Middle East and is thus at the fulcrum of a regional market with a vast population, large and diverse resources, and a large trade potential.

Pakistan is a country of extremes. On one side, the country displays some of Asia's most magnificent landscapes as it stretches from the Arabian Sea, its southern border, to some of the world's most spectacular mountain ranges in the north. Pakistan is also home to sites that date back to world's earliest settlements matching those of ancient Egypt and Mesopotamia

On the other side, the country faces significant economic, governance and security challenges that are currently hindering its development perspectives. The sharp rise in international oil and food prices, combined with recurring natural disasters like the earthquake in 2005 and the floods of 2010 and 2011 had a devastating impact on the economy.

The slow development of the hydro-electric projects of the electric grid system still expose several areas of the county to electric outages.

There has been a persistent downward trend in poverty incidence over the past decade- the percentage of population below the poverty line fell from 34.5 percent in 2001/02 to 12.4 percent in 2010/11 (interim figures) and Pakistan is on track to achieve the MDG target with regard to poverty²

In the recent years, greater decision-making authority has been delegated to provincial governments. The Eighteenth Constitutional Amendment has devolved a number of key functions to the provinces. In total, functions in seventeen federal ministries have been devolved, including Agriculture, Education, Environment, and Health. In addition to this, a greater share of revenues has been passed to the Provinces through the National Finance Commission (NFC) award in order to enable them to perform these functions. As expected, the devolution has posed institutional and capacity challenges at the provincial level, and meeting these challenges will require concerted efforts to enhance sub-national capacity and institutional development, which varies across provinces. Therefore under the current project, institutional arrangements have to be carefully worked out at the provincial level so that provinces may also equally take the responsibility during preparation of the chemical inventories as well as disposal of the POPs pesticides and PCBs in accordance with the newly developed strengthened legislation with due provincial representation. Special endeavours have also to be made for development of a viable implementation and enforcement mechanism with sound basis of monitoring and evaluation.

a. Pakistan and the Stockholm Convention

The Stockholm Convention on Persistent Organic Pollutants (POPs) was signed by Pakistan on 6 December 2001 and ratified on April 14, 2008. In the context of enabling activities, the National Implementation Plan (NIP) was submitted on 16 July 2010. This document provides a

² Pakistan MDG Report 2013

policy framework, which lays out the guidelines for addressing the specific issues of POPs pesticides and PCBs in Pakistan.

Continuing efforts are being made to improve the existing policy and regulatory systems under the National Implementation Plan (NIP) - POPs, and to strengthen enforcement, monitoring & compliance. The project is in line with the national priorities and interests as defined in the NIP on Persistent Organic Pollutants. The strategy of the Government of Pakistan is to have a sound POPs management system established and operational as soon as possible. The project proposes a series of activities to strengthen the existing legal and regulatory framework for POPs management and build technical, enforcement & monitoring capacity of local communities, concerned governmental departments and relevant stakeholders.

b. Pakistan Status of ratification of international conventions on chemicals and environment

In addition to the Stockholm Convention, Pakistan has ratified a number of other MEAs, listed in Table 1 below. The country is Party to the Basel Convention having acceded to this convention in 1994 and a Party to the Rotterdam Convention which it acceded to in 2005. Pakistan has been among the first group of signatories of the Minamata treaty on Mercury.

Table 1. International conventions and multilateral agreements signed, ratified and acceded to by Pakistan

Multilateral Environmental Agreements	Participation/ Signing Status	Ratification/ Accession (a)	Responsible National Institutions
Stockholm Convention on Persistent Organic Pollutants	06/12/2001	14/04/2008	Climate Change Division
Basel Convention on the Trans-boundary Movement of Hazardous Wastes and their Disposal		26/07/1994 (a)	Climate Change Division
Rotterdam Convention on Prior Informed Consent for Certain Chemicals and Pesticides in International Trade	09/09/1999	14/07/2005	Ministry of National Food Security
Minamata Convention on Mercury		10/10/2013.	Climate Change Division
Global Harmonized System of Classification and Labeling of Chemicals			
Vienna Convention		18.12.1992 (a)	Climate Change Division
Montreal Protocol			Climate Change Division
– London Amendment to the Montreal Protocol		18.12.1992 (a)	Climate Change Division
– Copenhagen Amendment to the Montreal Protocol		18.12.1992 (a)	Climate Change Division

Multilateral Environmental Agreements	Participation/ Signing Status	Ratification/ Accession (a)	Responsible National Institutions
– Montreal Amendment to the Montreal Protocol		17.02.1995 r	Climate Change Division
– Beijing Amendment to the Montreal Protocol		02.09.2005 r	Climate Change Division
Development of a National Profile on chemicals management, (SAICM implementation)		2009	Climate Change Division
UN Framework Convention on Climate Change			Climate Change Division
– Kyoto Protocol	11.01.2005		Climate Change Division
UN Convention to Combat Diversification			Climate Change Division
Convention on Biological Diversity	05.06.1992	1994-07-26	Climate Change Division
– Cartagena Protocol on Bio-safety	04.06.2001	2009-05-31	Climate Change Division
Convention on Chemical Weapon			Climate Change Division

c. GEF projects launched in the framework of the Stockholm Convention

After NIP, this project is the first GEF project on POPs in Pakistan, and the only national project ever submitted to the GEF by the country. One regional project and one global project which also involve Pakistan have been submitted by UNEP to the GEF as below:

Table 2. GEF project launched or implemented in Pakistan

GEF ID	Project Title	Agency	GEF Grant	Co-funding	Status
1792	POPs Enabling Activity: Preparation of the POPS National Implementation Plan under the Stockholm Convention	UNDP	499,650	151,800	Completed
5148	Subregional Action Plan (Asia) for PBDEs Management and Reduction	UNEP	3,950,000	11,800,000	Council Approved
5525	Global Project on the Updating of National Implementation Plans for POPs	UNEP	1,321,550	993,000	CEO Approved

Baseline analysis

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

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.

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.

The list of the main relevant legislation in Pakistan follows.

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.

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.

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

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”*

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.

Agricultural Pesticides Rules, 1973. Pursuant to the above enactment, rules were made by the GOP in 1973. The rules give the detailed procedures for complying with the provisions of the main law. They contain provisions giving details of registration procedure and grounds for refusal to register. Certain pesticides including some POPs need to be labelled as POISON.

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.

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 that was why the importers used the loopholes to their advantage.

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.

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.

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. However, the National Implementation Plan of Pakistan 2004-05 highlights the need for such legislation and underlines the year 2025 by which the country has to dispose of all PCBs contaminated equipment. This description forms the basis for primary legislation related to PCBs management in the country.

Sections 13 & 14 of PEPA 97 deal, in general, with prohibition of import of hazardous wastes & handling of hazardous substances. PEPA-1997, Section 11 sets the National Environmental Quality Standards (NEQS) for specific pollutants. Although PCBs are in the list of hazardous substance under the "Hazardous Substances Rules 2003, as the majority of other POPs these substances have not been specifically included in the list of NEQS. In addition, PCBs are not

classified as “Banned Items” (Negative List) or “Restricted Items” in the “Import Trade and Procedures Order, 2000.”

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 arrangements

b. The situation of POPs pesticides in Pakistan

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.

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.

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.

c. The situation of POPs stockpiles in Pakistan

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.

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.

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, Heptaclor, 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.

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

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.

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.

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-	500+ Tons	10.8 Tons

	101), Plant Protection Department		
Sindh	Karachi (Malir Halt)	Shifted and dumped in Thatta (Gharo) during 1994-97. Now Malir District Court established at the same site.	20 Tons and 15,425 liter
	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, Peshawar	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

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.

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.

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

e. The situation of PCBs in Pakistan

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:

- 1) 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;
- 2) 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
- 3) reclamation centers operate without significant protection of the worker’s health or the environment.
- 4) auctioned transformers may easily cross the Pakistan border with Afghanistan.

- 5) 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.

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.

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.

For instance, it is well known that in North America, the data concerning the PCB inventory³ 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)⁴ 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. 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.

f. Institutional arrangement of the Electricity System

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.

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

³ CEC. 1996. Status of PCB management in North America. Commission for Environmental Cooperation, Montreal, Canada, and RPC. 1988. Estimated 1988 PCB equipment inventory, Appendix A. Resource Planning Corporation. October.

⁴ 1) Italian guidelines on the identification of BAT for the safe storage and decontamination of PCB containing equipment and waste. Italian Ministry for the protection of Environment, Land and Sea. (Commissione ex art. 3, comma 2, del D.Lgs 372/99), luglio 2004.

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.

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..

g. POPs Monitoring capability in Pakistan

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.

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).

h. POPs Disposal capability in Pakistan

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.

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.

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.

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

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.

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.

POPs pesticides stockpiles

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.

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.

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.

NIP envisaged the following activities:

- 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.
- 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.
- 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.

These activities have not been implemented yet and, also due to the floods that affected Pakistan in 2010 and 2011,

PCBs, The following activities proposed under NIP did not start yet:

1. 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.
2. 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.
3. By 2012, prepare projects detailing program for decontamination and rehabilitation of sites contaminated with PCBs, for implementation by 2025.
4. 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.

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.

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.

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.

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.

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. .

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

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.

Stakeholders' analysis

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.

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.

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.

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.

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.

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.

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.

Table 3: List of the main project stakeholders and relative roles

Government Agencies	Key function and mandate	Common responsibility and duties
Climate Change Division	<ul style="list-style-type: none"> - National focal point of the Stockholm, Basel, and Rotterdam conventions - 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 	<p>Draft laws, resolution, decree, national target programs, etc. to be submitted to the Government for approval</p>
Ministry of National Food Security and Research	<ul style="list-style-type: none"> - 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 <p>National focal point for Rotterdam Convention on pesticides?? At present, National Disaster Management Authority (NDMA) is focal point for Emergency Coordination in case of chemical disaster in the country. NDMA is being assisted by Ministry of Industries, Ministry of Foreign Affairs, Central Board of Revenue (CBR), Climate Change Division and Ministry of Commerce. In this regard. CBR is managing import / Export control system related to different chemicals. The matters related to pesticides industry are being managed by the Ministry of National Food Security and Research.</p>	<p>Issue circular, decisions, direction, guidelines, federal technical regulations, and other legal documents under each ministry's jurisdiction</p> <p>Lead, instruct and organize implementation of legal documents, strategies, plans, national target plans, etc.</p>
MOH	<ul style="list-style-type: none"> - This Ministry is responsible for provision of medical services, to frame the health policies and to enforce the same at the national level. - Responsible for the Pakistan Health system 	
PARC and NARC	<ul style="list-style-type: none"> - Pakistan Agricultural Research Council (PARC) is the apex national organization working in close collaboration with other federal and provincial institutions in the country to provide science based solutions to agriculture of Pakistan through its statutory functions. - National Agricultural Research Centre (NARC), 	<p>PARC undertake, aid, promote and coordinate agricultural research, perform</p>

Government Agencies	Key function and mandate	Common responsibility and duties
	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.	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 (KE), Hyderabad Electric Supplu Company (HESCO).

II. STRATEGY

In Pakistan there is not yet a complete regulatory system on POPs. The existing regulation only concerns the restriction of the first list of POPs regulated by the Stockholm Convention before 2009, with specific reference to pesticides. However, as already explained in other sections of this document, provisions on PCBs management, hazardous waste management and disposal, as well as environmental quality standards for disposal facilities are very weak and not compliant with the Stockholm and the Basel conventions.

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.
- Potential PCB owners. 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.
- Through this project, it 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 upgrading of the transformers storage and maintenance, as well as PCB transformers disposal.

The project will therefore remove the barriers a) to d) stated above by strengthening the pre-conditions for ensuring commitment and sustainability from the relevant stakeholders, which are:

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.

In addition to the work on improving legislation, the project will activate two very important drivers:

- 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.
- Cost effective measures for reducing exposure (for consumers and workplace). To make this effective, awareness raising on POPs need to be complemented, or even anticipated by the proper answers and actions for reducing risk.

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.

On the side of disposal, to tackle the barriers of limited disposal capacity (e) and to minimise risk the project intend to adopt a two tiered strategy for disposing the committed 1500 tons of waste (300 tons of PCBs + 1200 tons of POPs), as following:

Option 1: To develop local disposal capacity

To identify different options for disposal of the POPs, discussions were held with the proposed executing agency of the project such as Climate Change Division as well as a wide range of relevant stakeholders. During each meeting, majority of the stakeholders insisted that disposal facility should be established within country instead of shipping the wastes abroad. The establishment of domestic capacity for POPs would ultimately benefit the country at large by saving national revenues and would allow the country to respond more effectively in case of pollution accidents. In case of failure of the establishment of domestic POPs disposal capacity, POPs containing waste will continue to be shipped abroad for disposal, exposing therefore the country at both environmental and financial risk. The main and preferred approach is therefore to develop local disposal capacity within the country. This will imply the identification of the candidate facility, feasibility analysis, upgrading the SC requirements, and proof of performance testing, permitting and operation. Establishment of local disposal capacity for the disposal of hazardous waste, supported by a modern regulation implementing SC requirements, will create a sustainable market for eliminating waste which eventually will represent a benefit for both the environment and the economy.

Due to cost and complexity of this option, the project could sustain the cost of only one facility. This means that POPs stored in one province will have to be transported to the province where the upgraded disposal facility is located, with obvious administrative, legal and political implication that will have to be solved by the project.

In the preliminary consultations most of the stakeholders declared that in Pakistan facilities for disposing of hazardous chemicals are lacking. This is also clearly stated in the NIP. A number of facilities may however exist that can be used for disposing POPs once upgraded up to the Stockholm Convention requirements (of which the most stringent is an emission limit for PCDD/F of 0.1 ng TEQ/m³). There are for instance a number of cement kilns, of which some are very large (<http://www.cemnet.com/qcr/country/Pakistan>). Preliminary discussions with an international cement firm operating in Islamabad confirmed that disposal by cement kiln could be a viable option. In the course of the project, surveys and site visits at existing incineration facilities will be conducted to check their compliance with SC and verify their possible use for disposal of POPs stockpiles.

Option 2: To safely store the POPs stockpiles and send for disposal

If at any stage of the project, but within a fixed deadline from project start (maximum 2 years), based on the feasibility study and the proof of performance test it will emerge that no facility fulfilling Stockholm Convention requirements can be reasonably established within the country and project deadline, the project will go for option 2, the POPs stockpile (POPs pesticides and PCBs oil/equipment) which in meanwhile will have been safely stored, will be packaged and sent abroad for disposal, in compliance with the Basel Convention requirements.

Management of PCBs

On the PCB side, surveys and meetings with electric power companies (IESCO and some others) shown that at this stage there are two urgent needs to be tackled: 1) companies are not aware of the amount of contaminated or pure PCB transformers they have. This information will

be crucial to understand their liability and business plan for them once the legislation on PCBs – in compliance with the Stockholm Convention – would have been prepared and enforced. 2) currently and in the next few years, several end of life transformers will be dismantled and their carcasses auctioned. Although at the dismantling facilities the oil drained from the transformers is stored, it is not clear what the final use of this oil is. Past evidences proved that the oil at the reclamation facility is PCB contaminated and there is a substantial risk that this oil enters the environment. Therefore, to address the barriers listed under (C and D) the project will carry out the following activities on the PCB side:

- pilot inventory of PCBs for one selected power company;
- upgrading of the dismantling facility and of the dismantling and storage procedures at the dismantling facility to ensure that PCB equipment are managed in an environmentally sound way;
- cleaning of transformer carcasses;
- disposal of PCB oil (either by means of the facility upgraded within the project or by shipment abroad). This activity will address the highest priority risks and pave the way for a more comprehensive PCBs management which would be subsequently implemented in the country.

Keeping in view the reports in the context of floods of 2010-11, some of the stockpiles of POPs pesticides and PCB contaminated equipment were displaced or washed away polluting some of the ecological areas and causing health hazards. Although not officially confirmed, some of the pesticide dealers and manufacturers have shared that some of the obsolete as well fresh pesticide stocks were displaced during the floods causing environmental pollution. The project will undertake monitoring activities to determine the validity of such media reports and some relief agencies who have been working in the flood areas. The reports about displacement of pesticide stockpile at Pasni Balochistan due to flood in Shadi Core Dam were confirmed during the recent survey. Similarly according to some reports, Pakistan floods released stored toxic chemicals⁵

At the time of formation of steering committee of the project, due representation of relevant departments from other provinces will be ensured to comply with the devolution of power initially developed in 2001 but implemented in 2011 when several federal ministries were devolved to the provinces by the Government of Pakistan. To access all the important sources of POPs pesticides and PCBs, project offices at the provincial level with reasonable operating capacity as well as field offices in the major districts will be established. Regular interaction of these offices with the relevant line agencies of the government will be ensured.

The project will duly address to all the four major components in line with approved work plan with a strong monitoring and evaluation component keeping in view the past situation that caused serious delays in implementation. The implementation will be carried out in accordance with the proposed M&E plan of the project.

A well designed communication policy will be adopted by the project for effective flow of information, media projection and to have timely access to the end users. Diversified channels of communication based on Information Communication Technologies (ICTs) will be adopted for dissemination of project information. Especially the public sector organizations will be followed up for adopting and being used to with the ICTs for multiple interaction with other partner organizations related to project matters.

⁵ Brahic, Catharine. Pakistan floods released stored toxic chemicals. New Scientist, Dec. 8, 2010 (<http://www.newscientist.com/article/dn19837-pakistan-floods-released-stored-toxic-chemicals.html#.U3BQCigawjq>)

Under the established project organogram, each agency, partner and personnel will be accountable in accordance with their TORs. The decision-making parameters will be clearly defined as to whom, how and when to report for taking the decisions about any issues.

Soon after the project inception workshop, the project will formulate a detailed action plan based on identified project activities with definite timelines, responsibilities, deadlines, possible risks and mitigation strategies.

Compliance with the BAT/BEP criteria established under the Stockholm Convention and the Basel Convention for the disposal of POPs.

Based on the experience gathered by UNDP in a number of POPs management projects worldwide, specific attention will be paid to ensure that the technologies adopted for POPs transportation, storage and disposal will be in compliance with the BAT/BEP criteria established by the BC and SC. This will be ensured both at technology selection/procurement stages and subsequently as for benchmarking monitoring and verification of the proof of performance tests to be carried out after technology delivery and installation. The main quantitative and qualitative criteria that will be used are shortly described below.

- **Performance Targets for POPs Destruction and/or Site Remediation.** The first criteria which will be considered when selecting a technology, both at the procurement and testing stage, is whether the technology may suit the required cleanup or disposal targets. There are different targets to be considered. The Stockholm Convention does not set any specific target for cleanup or disposal technologies except what is indicated in Article 6.D.ii, that the levels of destruction and irreversible transformation should ensure non-POPs characteristics. The Stockholm Convention allows only “waste with low content of POPs” to be disposed without being destroyed (e.g. by landfilling), and, at article 6.2, it calls for coordination with the Basel Convention to “establish level of destruction and irreversible transformation” and” define the low persistent organic pollutant content “. The updated Basel Guidance² establishes for POPs, PCBs and PCDD/F waste, respectively, a “low POP” concentration value of respectively 50 mg/kg 50 mg/kg and 15 µg/kg.
- **DE and DRE.** In turn, the disposal technologies to be established under the project will comply with the generally accepted levels of destruction efficiency (DE) and destruction removal efficiency (DRE) (99.99 % and 99.9999% respectively) (specified among others under the (GEF STAP guidance document which is linked to the Convention through the GEF’s role as the Convention’s financial mechanism) for direct destruction technologies applied to POPs stockpiles and waste. Concerning emission level of U-POPs in the atmosphere, disposal technologies under the project will comply with the commonly accepted BAT level of PCDD/F emission from the stack of disposal plant as set at less than 0.1 ng TE/Nm³,
- **DE and DRE** are obviously critical in assessing any disposal technology, and are the most common benchmarks adopted for comparison of technology performance. Even DE and DRE however should be applied carefully. The Basel updated technical guideline¹ limits the scope of DE and DRE declaring that these “*do not cover formation of unintentionally produced POPs during destruction or irreversible transformation*”. Nonetheless, in case of PCBs destruction, calculation of DE on the basis of PCBs+PCDD/F would provide a useful assessment of the level of detoxification achieved. The DE methodology will also be adopted for understanding with a lifecycle perspective the mass balance of pre-treatment, cleanup and disposal operations as a whole. DE and DRE will be always considered throughout implementation of disposal activities together with the capability of the technology to achieve the required environmental targets.

- **BAT and BEP.** Compliance with Best Available Technology and Best Environmental Procedure is another important criterion when evaluating technologies. The Stockholm Convention requires that “to minimize their releases of POPs from unintentional production, Parties shall promote in some cases and require in others the use of best available techniques, and promote the application of best environmental practices.” At article 6.2.i, the Stockholm Convention calls for cooperation with the Basel convention to “determine what they consider to be the methods that constitute environmentally sound disposal”. The project will proactively identify the management operations that may lead to release of POPs in the environment (for instance at the pre-treatment stages) and adopt the necessary BAT/BEP countermeasures.
- **Process reliability and disposal cost.** Finally, a great attention will be paid to the assessment of process reliability, at both procurement and testing stage, as previous POPs disposal projects implemented by various UN agencies, revealed very clearly that even consolidated, commercially available technologies, when operating under new or unusual conditions (including extreme climate, high throughput, waste or soil composition) may reveal reliability issues. Disposal cost will be another critical aspect to be considered in establishment of disposal technologies. The fulfillment of the strict environmental standards and criteria required by the Basel and Stockholm convention always imply an incremental cost compared to sub-standard technologies. This incremental cost may be supported under the GEF mechanisms for the implementation of the convention on POPs. However, even in the presence of GEF support, there is still the requirement that the governments establish standards and rules consistent with the international conventions, to ensure the sustainability of the environmentally sound technologies:
- **Resource consumption.** Consumption of resources (fuel, water, chemicals, land) is one of the main factors which may condition the establishment of a technology in a country. Resource consumption is directly linked to the sustainability aspects illustrated above, and will be looked at in a lifecycle perspective.

Coordination with PPD, NARC, PARC and FAO on policy with the purpose to ensure policy consistency on POPs pesticides

PARC (Pakistan Agricultural Research Council) undertake aid, promote and coordinate agricultural research, perform high level training, manage information relating to agriculture. The functions of PARC as laid down in PARC Ordinance 1981 are as follows:

- To undertake, aid, promote and coordinate agricultural research
- To arrange expeditious utilization of research results
- To establish research establishments mainly to fill in the gaps in existing programs of agricultural research
- To arrange the training of high level scientific manpower in agricultural sciences
- To generate, acquire and disseminate information relating to agriculture
- To establish and maintain a reference and research library
- To perform any other functions related to the matters aforesaid

NARC (National Agricultural Research Center) 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, avoiding unnecessary duplication of research efforts. Research which can best be addressed at a national centre rather than by provincial institutions is undertaken at NARC. The adaptation of technologies available from the international research system is also managed by NARC, in collaboration with the provincial research and extension institutions.

Since the early 1950s, FAO provided assistance in building and strengthening the national agricultural infrastructure, particularly in irrigation, on which most of Pakistan's agriculture system relies. The following decades saw a dynamic collaboration for rural development, poverty reduction and food security, especially in upgrading and strengthening of research, training and extension services, and enhancement of staff capabilities in planning and policy making. In recent years, FAO has expanded its focus on sustainable agriculture through efficient natural resource management, bio diversity and gender mainstreaming. In November 2013, Assistant Country Director UNDP held a meeting with FAO team interested to identify and dispose off the obsolete as well as POPs contaminated pesticides in Balochistan with assistance from USAID. They shared views to build synergies between both the organizations and share relevant information.

Acknowledging the above, the project will strive to ensure coordination with these organisations on agricultural issues related to POPs, relevant to project activities, to ensure consistency on project's related policies, guidance and training.

Addressing gender issues with specific reference to impact of POPs and lacking of awareness.

Local stakeholder consultation and participation is an integral part to the project. A specific mechanism will be adopted to address gender, in consideration that women (and children) are often deeply involved in agriculture, but are also not given a large voice in public discourse.

'In Pakistan, the information on side-effects of pesticides is very scarce. Only few reports are available. Pilot survey for side-effects of pesticides experienced by the farming community was conducted in the districts of Bahawalpur, Rahim Yar Khan and Sahiwal by Jabbar and Mohsin (1992). Female cotton pickers hardly get any medical treatment for any ill effects arising out of contact with pesticides. The male community does consult the medical staff. 86% males claimed to be aware of the side-effects of pesticides. However, 86% female cotton pickers, on the other hand, had no information on the side-effects. The lack of education in the female population and the unavailability of trained female practitioners in the rural areas are likely to be the main causes of this disproportionate precautionary measure by gender⁶.

It has also been observed that while women are engaged in agricultural practices other than cotton picking such as vegetable collection, hoeing, harvesting of crops such as wheat and maize where women get infected with these chemicals as they penetrate into their body. And those women who breast feed their children; chances are of more affect to the children as well. It has also to be specifically considered the fact that several POPs are teratogens. For instance, Polychlorinated biphenyls (PCBs) were linked to delayed fatal growth, abnormal neural system development, and impaired behavioral and cognitive functions in a child. There is therefore the need to provide specific information for reducing risks arising from the exposure of women to POPs.

Awareness raising initiatives, specifically tailored to women and taking into consideration the specific impact of POPs on women at workplace (agricultural practices, use of recycled POPs container, risk posed by wearing and washing POPs contaminated clothes, like for instance PCBs contaminated work suits, and even the improper use of dielectric oil as reported from some sources) will be developed, women shall be trained to use safe practices, protective measures to handle these chemicals.

⁶ Working paper series 1994 on Pesticides and Environment situation in Pakistan

Women Development Departments will also be actively engaged in the project interventions. Preliminary meetings have already been conducted with WDD Sindh, in this regard. The project team also met Ms. Rubina Qaimkhani, who is Minister of Women Development in the Government of Sindh in order to aware her about the hazardous nature of the chemicals and various threats posed to women. The minister ensured her cooperation in this regard and once the project will commence, gender issues will be addressed through her support.

Institutional, sectoral and policy context

a) Policy context

Pakistan has ratified the Stockholm Convention on POPs on April 14, 2008, as well as acceded the Basel Convention on the Trans-boundary Movement of Hazardous Waste and their Disposal in 1994, and Rotterdam Convention on Prior Informed Consent for Certain Chemicals and Pesticides in International Trade in 2005.

The project is compliant with the policy and action plan established by the country under the NIP.

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.”

b) Legal context

As already explained in the text, the following are the main regulatory texts related directly or indirectly to POPs management:

- The National Environmental Policy (NEP-2005); which 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.
- The Agricultural Pesticides Ordinance (1971), regulating the import, manufacture, formulation, sale, distribution and use of Pesticides in Pakistan;
- The Agricultural Pesticide Rules; (1973), containing provisions giving details of registration procedure, grounds for refusal to register. Certain pesticides including some POPs need to be labelled as POISON
- The Pakistan Environmental Protection Act (1997), including among others provisions on hazardous waste, and prohibition of import of hazardous waste.
- The National Environmental Quality Standards, setting emission or release standard for certain activities in the atmosphere and in water bodies;
- The Hazardous Substances Rules (2003), providing a list of banned items, and restricted items.

Project Rationale and Policy Conformity

The project intends not only to be compliant with the existing Pakistan policy, but to effectively promote the integration in the country policy and regulation of the requirements of the Stockholm Convention on POPs. Indeed, under the recent legislation, there is no mention of PCBs and nor under the restricted lists of chemicals. Keeping in view the weak legislation and absence of a sound enforcement mechanism regarding POPs pesticides, the role of the project emphasizing upon strengthening the regulatory and policy framework, capacity development of relevant institutions, identification and inventory of POPs and PCBs is of tremendous importance. In this way, successful implementation of the project would enable the state

institutions for complying with the provisions of Stockholm Convention that has already been ratified by Government of Pakistan.

The goal of the GEF 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 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.

Response to GEF Review

In the following, the response to the STAP comments on the PIF are provided:

<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</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>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>(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>

Project Description

Project Goal, Objectives, Outcomes and Outputs/activities

The **Objectives** of the project are the environmental safe disposal of POPs (1200 tons of pesticidal POPs and 300 tons of PCBs) enhancing at the same time management capacities and disposal of POPs in Pakistan.

Although the project could not likely dispose all the pesticidal POPs and PCBs existing in Pakistan (also because the exact quantification of these stockpiles is a continuous process which will continue even after project closure) by establishing a proper regulatory and monitoring system and enhancing the disposal capability of the country, the project will ensure that further POPs stockpiles can be effectively and safely disposed by the country as soon as they are identified.

The project intend to achieve this objective improving the regulatory system, enhancing its enforcement, raising awareness on POPs, and by establishing the capacity for POPs monitoring, handling, transport and disposal.

This will contribute to the broader **Goal**, which is to reduce risk for the human health and the environment by avoiding the release of POPs in the environment and preventing people exposure to POPs.

The project has been arranged in four components (including Monitoring and Evaluation) as following:

- **Component 1. Development and implementation of a Regulatory, Policy and enforcement system to reduce POPs releases**
- **Component 2. Capacity building of local communities and public and private sector stakeholders to reduce exposure to and releases of POPs**
- **Component 3. Collection, Transport and Disposal of PCBs and POPS Pesticides**
- **Component 4. Monitoring and evaluation.**

The following is a description of Outcome and Output under each component

Outcome 1.1. Strengthened POPs regulatory and policy instruments adopted and POPs management systems for controlling and reducing releases of POPs functional.

Under this outcome, activities aimed at improving the Pakistan environmental regulation making compliant with the Stockholm and Basel convention will be conducted. Specific norms and rules regulating hazardous waste handling and disposal, PCBs, and integration on the existing provisions on POPs with the provisions on new POPs will be made. In addition, guidance documents for the specific needs of management and disposal of POPs will be drafted and endorsed.

In order to secure this Outcome, the following Outputs are anticipated:

Output / Activity 1.1.1 .Key POPs related national legislation developed.

Following a detailed gap analysis to comply with the Stockholm and Basel Convention requirements, a specific set of secondary law and norms on the following aspects will be developed.

- PCBs inventory and management;
- Hazardous waste management disposal with specific reference to waste containing POPs
- Emission standards for hazardous waste disposal facility
- Integration of the existing legislation with new POPs.

Output / Activity 1.1.2. Technical guidance documents

Technical guidance document for implementation of the new regulation, addressed to the legal entities who have to comply with the regulation will be developed.

This will encompass a complete set of guidelines for POPs, inclusive of inventory of PCBs, management (identification, labelling, transport, storage and disposal) of POPs chemicals and POPs waste, alternatives to POPs in industry and agriculture, BAT/BEP for minimisation of U-POPs releases from waste treatment in developed.

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

In order to secure this Outcome, the following Outputs are anticipated:

Output / Activity 1.2.1. Roles and administrative procedures, enforcement tools for POPs management at federal/provincial and municipal levels developed.

Under this output, roles and administrative procedures will be established. Responsibilities will be assigned and offices for the enforcement of POPs management at provincial and municipal level established.

Output / Activity 1.2.2. POPs management and enforcement stakeholders trained to their tasks. The training modules will concern both technical and legal aspects.

Training will be preceded by a proper Training Need Assessment, as well preliminary evaluation of the trainees to check their knowledge of the matter and emerging needs, and will be followed by a test to measure the effectiveness of the training. At least 400 officers in charge of POPs management (PCBs, POPs stockpile, hazardous waste) will be trained to their tasks and responsibility. At least 400 relevant stakeholders trained on their tasks and responsibilities.

Outcome 1.3. Governance and enforcement particularly on illegal imports framework for controlling POPs improved.

Under this outcome, procedures, responsibilities and offices for the enforcement of provisions related to import/exports of POPs substances or POPs containing or contaminated articles will be established. Custom officers and managers will be trained on POPs issues and strategies.

Output / Activity 1.3.1 Procedures, responsibilities and offices for enforcement of provisions related to illegal import or exports established. These procedures will concern both POP pesticides and PCBs.

Output / Activity 1.3.2 Custom administration and officers trained on POPs related issues. The training modules will concern technical and legal aspects, and will be integrated with the specific training for custom officers.

Outcome 1.4. National Chemicals Profile updated

Output / Activity 1.4.1. Data compilation and elaboration of an updated Chemicals Profile for Pakistan

The Pakistan Chemicals Profile, which was for the first time drafted in 2009, will be updated.

Outcome 2.1. Stakeholder groups aware of sources and prepared to mitigate POPs exposure and releases with specific reference to pesticide stockpiles.

In order to secure this Outcome, the following Outputs are anticipated:

Output / Activity 2.1.1. Development of awareness and training programs on POPs sources on cost effective POPs exposure and release reduction steps as well as alternatives to POPs.

Output / Activity 2.1.2 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.

Output / Activity 2.1.3 Training of PCB holders in safe PCB handling during maintenance
Stakeholders will be properly identified and involved in raising awareness initiatives. Awareness and training gaps for each stakeholders properly identified and addressed. Awareness and training programs on POPs sources, on cost effective POPs exposure and release reduction steps as well as alternatives to POPs has been prepared and adopted.

Outcome 2.2. Cost effective POPs exposure mitigation undertaken focusing mainly on PCBs.

This outcome will include the following output:

Output / Activity 2.2.1 Specific guidance documents developed and training for PCB holders in safe PCB handling during maintenance undertaken.

This will encompass the following:

- Identification and labelling of PCB contaminated equipment;
- Screening and laboratory analysis of PCBs;
- Maintenance, handling, transportation and storage of PCB contaminated equipment;
- Disposal / treatment of PCB contaminated equipment.

Outcome 2.3. POPs awareness among key target groups, such as decision makers, high/risk occupations etc. raised.

This outcome will include the following output:

Output / Activity 2.3.1 Professional and community level training sessions on exposure to POPs pesticides and release undertaken as well as risks associated with unauthorized products covering 30 institutes and 50 communities, including a specific training activity for addressing gender issue, carried out.

Outcome 2.4 Reduced POPs exposure in occupational setting.

Output / Activity 2.4.1 Guidance for exposure reduction to POPs in priority areas, including indirect exposure and gender-related exposure developed.

Output / Activity 2.4.2 Training on POPs, Personal Protective Equipment, Risk Management Measures and Exposure Scenarios for workers and control authorities in specific industrial sectors.

Output / Activity 2.4.3 A. specific training activity for women addressing POPs issue implemented

The above group of outputs is mainly intended at reducing exposure to POPs not only in industrial setting, but also exposure related to improper use of recycled container, use of obsolete pesticides, improper behaviours like carrying contaminated work wear at home will be covered.

Outcome 3.1. Capacity to undertake POPs disposal projects at provincial level established.

To achieve this outcome, a complete system of POPs storage, transport, packaging, and disposal will be established, together with the relevant procedures. Two separate lines of activities will be carried out, one for PCBs and another one for pesticidal POPs, although the option to adopt for the final disposal the same disposal technology will be considered. To secure this outcome, the following activities will be carried out:

Output / Activity 3.1.1 National Inventory of POPs stockpile upgraded, including map for identifying priority sites

Considering the time needed for the implementation of the project, as well as the gap identified between the Independent Evaluation by UNDP conducted during the PPG phase and the POPs inventory by GOP-CCD of 2004-05, there will be the need, at project starting, to reconfirm the amount and location of POPs stockpiles. The major stockpiles as indicated in the inventory of 2004-05 based on PPD data of 1970s and 1980s have been only partially reconfirmed during the site visits carried out by UNDP consultants in the course of PPG activities. Initial examination with pictures and as information shared by PPD and Agriculture Extension Departments, there have been major displacements, leakages and cases of theft at these stockpiles. There is the clear need to identify and secure POPs stockpiles for storage and disposal at the very start of the project. In addition, the inventory of POPs and stockpiles, to be carried out at national level, will include a prioritisation of sites based on their susceptibility to natural disasters (mainly hydrological risks) and their proximity to sensitive environmental target.

Output / Activity 3.1.2 Storages upgraded and logistic plan developed

Based on the optimum transportation plan which at the same time can minimize the risk for transportation and the number of storage facilities to be upgraded, the minimum number of storage facilities will be upgraded to prevent leakage or dispersion of POPs in the environment. POPs from unsafe storages will be mobilized to the upgraded storage. Upgrade of storages will include training for workers on general aspects related to safety at work, and specific aspects related to the proper use of PPE and safe handling POPs contaminated materials. This would also include identification of locations that have minimum risks of being vulnerable to weather conditions.

Output / Activity 3.1.3 Pilot inventory of PCBs (testing of at least 5000 equipment) carried out in one Province.

Monitoring activities for PCBs will be planned in coordination with the power distribution companies who are going to be potential co-financiers and key partners in the project. Safeguards for testing, handling and disposal will be jointly developed and where required upgraded. In addition to this, the selected lab facilities will be restored and upgraded to enhance their PCBs related capacities.

A number of at least 5000 transformers or electrical equipment will be checked for PCB oil by means of quantitative screen testing. Data will be entered on a PCB inventory database.

The pilot inventory will also include relevant training on sampling, analysis and labelling of PCB contaminated equipment

Output / Activity 3.1.4 At least 2 PCB storage and dismantling facility upgraded.

A site for the dismantling and storage of PCB containing equipment will be upgraded for ensuring environmentally sound operation, after feasibility analysis and preliminary design.

Outcome 3.2. Environmentally Sound Disposal of POPs. Removal of particularly risky POPs stockpiles and the sound disposal of up to 1200 tons of POP pesticides and of 300 tons of PCB

Output / Activity 3.2.1 Identification, procurement and testing of suitable disposal facility.

A disposal facility in Pakistan will be identified and tested to prove its compliance with the BAT/BEP requirement under the Stockholm convention for the disposal of 1200 tons of POPs and 300 tons of PCB contaminated equipment. If successful, this facility will be selected for final destruction of POPs in Pakistan. The facility will have to be compliant with the criteria established in section “Compliance with the BAT/BEP” of this project document.

Output / Activity 3.2.2. Up to 1200 tons of obsolete POPs stockpile from Punjab and Sindh province safely disposed.

The environmentally sound packaging, transport and disposal to the selected facility of at least 1200 tons of obsolete POPs stockpile from Punjab and Sindh province will be carried out.

Output / Activity 3.2.3. Environmentally Sound Management and disposal of PCBs.

End of life PCB contaminated transformers will be safely dismantled and their carcasses decontaminated so that these can be recycled without harming the environment and the human health. An amount of at least 300 tons PCBs contaminated oil and solid waste contaminated by PCB will be packaged and sent for final destruction to the selected facility. Although it is envisaged that the project will deal mostly with highly PCB contaminated transformers (i.e. transformers filled with PCB mixtures), based on the outcome of the PCB inventory the proper technology (i.e. dehalogenation, in case of low contaminated non end of life transformers, or thermal treatment for highly contaminated and near-end of life transformers) will be assessed and adopted. The proper technology (either a dehalogenation mobile technology, or disposal services for PCB oil and PCB contaminated waste) will be identified, tested and procured under 3.2.1.

Outcome 3.3. National POPs management and disposal scheme and replication plan developed.

Based on the experience gathered on the disposal of POPs and pesticides, a national POPs management plan will be developed. This will encompass the following outputs:

Output / Activity 3.3.1. National scheme for obsolete POPs pesticide disposal as a part of hazardous waste management scheme developed.

Output / Activity 3.3.2 National management plan for PCBs based on the inventory and disposal of priority PCBs developed.

Output / Activity 3.3.3 Personnel and offices in charge of management and disposal of POPs appointed.

Component 4: Monitoring and evaluation

The component aims at monitoring and evaluation of results achieved to improve the implementation of the project and disseminate lessons learnt domestically and internationally. The outcome of the component are:

Outcome 4.1. M&E and adaptive management are applied to provide feedback to the project coordination process to capitalize on the project needs; and

Outcome 4.2. Lessons learned and best practices are accumulated, summarized and replicated at the country level and disseminated internationally.

Monitoring and evaluation will be carried out in compliance with both GEF policy on project evaluation and UNDP policy / guidance on project evaluation, taking in due account Country Office policies on the matter.

Details on Monitoring and Evaluation are provided in Annex V. Monitoring Framework and Evaluation.

Incremental reasoning and expected global, national and local benefits

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.

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.

Similarly, several ongoing projects aimed at establishing environmental monitoring capability cannot provide sustainable results in the absence of the proper regulatory framework.

The regulatory effort in Pakistan toward the implementation of the Stockholm Convention is also progressing at a relatively slow pace.

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.

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 $<0.1\text{ngTeq/Nm}^3$). 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.

The project will therefore built on the positive aspects to overcome the limitation and risks posed by the current baseline project.

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.

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.

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.

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.

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.

The project will therefore generate considerable environmental benefits to Pakistan and globally.

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.

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.

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.

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.

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.

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.

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.

Country Ownership: Country Eligibility and Country Drivenness

Pakistan has already ratified the Stockholm Convention in 2008. Now the state is bound to comply with this convention being part of international community. However, the pace of compliance with the SC has been very slow due to various reasons including the earthquake Of 2005 and floods of 2010-11 as well as many climate change induced disasters. However, with the commencement of current project, these gaps may be timely filled by efficient utilization of GEF support.

The Government of Pakistan has already established some regulations related to hazardous chemicals such as of 1971 and 1973. To a certain extent these also relate to some of the POPs but are very weak due to lack of any enforcement mechanism. However there are some basis that may be further improved and strengthened.

The UNDAF has the due provisions for addressing issues including the chemicals that if not addressed could damage the overall development process. Therefore, this is mandatory to comply with this framework that would also contribute to the state's efforts for sustainable development as well as 2020 vision of the Government of Pakistan.

The UNDP Country program has been in conformity with the government's five years program, 2020 vision as well as sustainable development policies and strategies for the provinces. Therefore, both the GOP and UNDP will be working smoothly to meet the common objectives of development under current project.

The UN-Pakistan "One Plan" which incorporates the UNDAF as well as the UNDP Country Programme document are exactly in line with the successful development and implementation of current project

The One UN Plan identifies areas where environment could be protected by taking all the relevant stakeholders on board. Therefore, it has synergies with the approach of the current project that is being implemented at national level and be linked with all the relevant UN programs dealing with environmental protection and human health.

Linkage with other related activities

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.

Sustainability

The project sustainability revolves around ownership of the issues emerging due to POPs and PCBs contamination, relevance of the partners involved with these issues, business plan development to strengthen the market based approach, public private partnership and successful demonstration of the model for replicability in other areas of Pakistan.

On the side of PCBs management, the key for the sustainability of the sector is the establishment and sound enforcement of proper regulation and a management plan. This is particularly relevant to electric power companies as electrical transformers and capacitors are expensive equipment representing a significant part of their asset. There is currently no strong motivation for electric power companies to take care of in an environmentally sound way of their equipment containing or contaminated by PCBs if there is no liability for them, and if technical assistance a practical and cost effective solution is not offered. Therefore, together with the establishment of a sound regulatory framework, the project intend to demonstrate cost-effective and safe solution viable for the electric power sector that will allow them to establish a PCB management plan and solve the most urgent PCBs related issues by providing technical and financial assistance in upgrading unsafe facilities and disposing a first batch of priority PCB equipment. This may pave the way for the establishment of private companies providing services related to the maintenance and decontamination of PCB equipment.

Similarly, on the side of POPs waste, the urgent need is the establishment of obligation for industries and owners of POPs stockpiles to have their waste disposed in compliance with the Stockholm and Basel convention. A more comprehensive regulation on hazardous waste management and its enforcement is needed. Again, sustainability requires the joint effort of regulation, enforcement and technical solution which only together will constitute the critical mass that may convert an environmental emergency into a business opportunity, in a win-win approach which sees the government and private enterprises operating in the field of waste management sharing the same goal.

Another key for sustainability is the awareness: only when the stakeholders (not only those directly interested, but also the general public and the consumer) are aware of the benefits brought by the elimination of POPs substances, there would be enough pressure on the authorities to ensure enforcement of the legislation. Awareness therefore is not a public relation exercise, but is one of the keys that will be used by the project to ensure the future sustainability of the activities.

Therefore, for long-term sustainability of the project, these aspects will be seriously taken care of. Ideally, the project has to be taken care of and owned by the government but private sector involvement with their due ownership will further strengthen its sustainability. The disposal facilities upgraded with support of this project and run in collaboration with the private sector such as cement kilns will level the ground for the enterprise development that could generate its own revenues by providing disposal facilities to the open market including pesticides companies, government storages and waste disposal agencies being recently established. In this way, the project would become sustainable with the potential being a replicable model also adopted by other cement factories or private entrepreneurs.

Replicability

Among the main objective of the project are to develop a number of environmental quality standards, guidance document on risk assessment and site assessment, guidance document on technology selection criteria that will ensure replicability and standardisation of activities in the country.

The Project generally supports the progressive development of POPs stockpile management, compliance with Stockholm Convention requirements, and more generally hazardous waste, contaminated sites and general sound chemicals management of PCBs. As such, the project has a number of features that will serve as examples and provide direct implementation experience in a number of areas that can support replication, both nationally and elsewhere, these include:

- Applying an approach to POPs stockpiles, waste and contaminated site elimination based on prioritizing risk mitigation, the cost effectiveness, and global environmental benefit as a primary criteria in capturing, securing and ultimately eliminating the POPs waste and associated risk.
- Ensuring an appropriate mix of developing national capability and utilizing established, international capability to obtain the most cost effective, sustainable and practically achievable results.
- Planning and developing national POPs and general PCB management infrastructure based on country needs
- Integrating of proactive public consultation and awareness activities into the planning and implementation of PCB and pesticide stockpiles and contaminated sites projects.

Better Management Practices (BMPs) are already proven with the best possible results as has been demonstrated in the developed countries ensuring environmental protection and human health.

III. PROJECT RESULTS FRAMEWORK:

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD:
Country Programme Outcome Indicators:
Primary applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one): 1. Mainstreaming environment and energy OR 2. Catalyzing environmental finance OR 3. Promote climate change adaptation OR 4. Expanding access to environmental and energy services for the poor.
Applicable GEF Strategic Objective and Program: Objective 1: Phase out POPs and reduce POPs releases
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.
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.

	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	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. Extent to which awareness on POPs	The integration of SC requirement on POPs in the existing regulation is very limited. A harmonized regulatory system aimed at reducing release of, and exposure to POPs and hazardous chemicals is still missing. Awareness of institutional and industrial stakeholders, as well as the general public	Existing regulation on chemical management updated and enforced with provisions related to POPs An integrated system for enforcing and controlling proper management of POPs, both ad administration and industrial sectors adopted A comprehensive package of regulations and guidance for POPs reduction and disposal, permitting of disposal facilities, PCB inventory and treatment established. Management capacity of governmental and industrial stakeholders increased. Awareness of relevant stakeholders	Project reports and documentation. Official acts related to the promulgation of new / amended laws. Training reports Workshop – meeting minutes. Hazardous Waste Manifests Site surveys Interview and questionnaires.	Risks: Regulatory authorities not committed to issue new regulation. POPs stockpile and PCBs not timely identified are released in the environment. Technology for disposing POPs and PCBs not timely established. Assumptions: Inventory of POPs and PCBs already started at PPG stage, and is the first and most urgent project activity. The GoP is highly committed to establish a modern environmental regulation implementing in a sustainable way the SC provisions. The project will follow a double approach

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
	<p>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 managed and disposed off</p>	<p>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>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>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>
Component 1. Development and implementation of a Regulatory, Policy and enforcement system to reduce POPs releases					
<p>Outcome .1.1. strengthened POPs regulatory and policy instruments adopted and POPs management systems for controlling and reducing releases of POPs functional</p>	<p>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.</p>	<p>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's emission is not compliant with the SC BAT/BEP</p>	<p>Key POPs related national legislation developed.</p> <p>National Technical POPs management Guidelines developed.</p>	<p>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</p>	<p>Risks:</p> <ol style="list-style-type: none"> 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. <p>Assumptions/countermeasures: 1) 2) and 3) Coordination and solution</p>
<p>Outcome 1.2 Government enforcement agencies and other</p>	<p>Number of national Technical POPs management Guidelines compliant</p>	<p>Inadequate specialized skills, financial resources, equipment and</p>	<p>60 staff from central and provincial level administration trained on enforcement of POPs related provisions.</p>	<p>Text of adopted administrative procedures and circulars establishing</p>	

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
organizations involved in regulating POPs management are able to use tools developed for POPs management and network with/regulate main agencies handling POPs.	with SC developed and effectively implemented. Number of management and enforcement staff at national and provincial level in at least 4 provinces have enhanced skills/capacities on POPs management and enforcement.	working tools by respective institutions dealing with POPs; Lack of dedicated administrative structure.	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.	POPs management at central and provincial level. Training material, training minutes, outcome of pre and post assessment of the participants.	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 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. 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, 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. 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
Outcome 1.3. Governance and enforcement particularly on illegal imports framework for controlling POPs improved.	Number of main custom offices out of the total number which have adopted procedures and circulars establishing POPs management. Number of officers from all the main customs successfully trained.	Inadequate awareness of importers and custom officers on imports requirements; Inadequate POPs inspectorate services Lack of control on the export of PCB content of end of life electrical equipment	Procedures, responsibilities and offices for the enforcement of provisions related to import/exports of POPs substances or POPs containing or contaminated articles established. Custom officers and managers trained on POPs issues and strategies. All the main customs in Pakistan have adopted procedures and circulars establishing POPs management.	Text of adopted administrative procedures and circulars establishing POPs management for custom officers. 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
Outcome 1.4. Comprehensive National Chemicals Profile improved and updated with enhanced steps taken for better response	Availability of an updated chemical profile report for Pakistan.	A chemical profile for the country was completed in 2009 by the International 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	Data compilation and elaboration of an updated Chemicals Profile for Pakistan with special reference to 1) priority concerns 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.	Update chemical profile report – preliminary and final draft	Risk: Upgrading of Chemical profile not fully taking into account changes 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 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
Outcome 2.2 Cost effective POPs exposure mitigation undertaken focusing mainly on PCBs.	Number of people successfully trained for each relevant sector. Percentage of people have enhanced post-training skills for safe PCB handling during maintenance.	Lack of guidelines on risk minimization procedures for handling, transportation, storage and disposal of PCB contaminated equipment. Lack of adequate legal provision for	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 and 50 people from large electricity consumption factories which are owners of potentially PCB contaminated equipment trained	Interview and questionnaires. Guidance documents for PCB owners. Training material, training minute, outcome of pre and post assessment of the participants	

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
		monitoring of POPs release and their effects to human environment; There are no legal provisions focusing on PCBs management			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, and 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 authorities have integrated POPs issues into their management and supervision structures A specific training activity for women addressing POPs issue implemented	Interviews, questionnaires, Training material, training minutes, outcome of pre and post assessment of the participants-	
Component 3.Collection, Transport and Disposal of PCBs and POPS Pesticides					
Outcome 3.1.Capacity to undertake POPs disposal projects at provincial level established.	Percentage of inventory of POPs stockpiles mapped and digitised Number of electrical	The National Implementation Plan (NIP) for POPs, inventories approximately 6,031 MT of obsolete	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	Preliminary and final inventory of POPs pesticide stockpile and contaminated sites. List of POPs	Risks: 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

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
	<p>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>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 PCB contaminated equipment.</p>	<p>least 5000 equipment) carried out in one Province</p> <p>At least 2 PCB storage and dismantling facility upgraded.</p>	<p>temporary storage sites.</p> <p>PCB pilot inventory with analytical reports</p> <p>List of PCB storage facilities.</p> <p>Logistic plan for transportation of POPs</p> <p>Plan and technical design for POPs storage upgrade.</p>	<p>stakeholders.</p> <p>4) Difficulties related to the inventory of POPs stockpiles and PCB contaminated equipment.</p> <p>5) Limited availability of suitable sites for storage of POPs stockpile and PCBs</p> <p>6) Technologies for POPs disposal not available in the country / available technologies not suitable.</p> <p>Assumptions/countermeasures:</p> <p>1) Coordination with provincial authorities will be ensured by ensuring these are represented in the project steering committees.</p> <p>2) Possible conflicts among different ministries' objectives will be solved by continuous interchange of information in the course of project implementation by holding meeting and workshops as frequently as necessary.</p> <p>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.</p>
<p>Outcome 3.2.</p> <p>Environmentally safe disposal of particularly risky POPs stockpiles and the sound disposal of up 1500 tonnes of POPs Pesticides and PCBs</p>	<p>Amount of POPs pesticide disposed off in an environmentally safe way.</p> <p>Amount of PCBs disposed off in an environmentally safe way</p>	<p>Currently the greatest part of POPs stockpiles and PCBs are not managed in an environmentally safe way.</p> <p>No disposal facility in Pakistan has been officially tested for disposing POPs waste.</p> <p>Disposal of obsolete pesticides has been carried out in compliance with EU</p>	<p>Identification, procurement and testing of disposal facilities or services.</p> <p>Up to 1200 tons of obsolete POPs stockpile from Punjab and Sindh province safely disposed.</p> <p>Up to 300 tons PCB equipment safely disposed.</p>	<p>Proof of Performance plan and reports for POPs disposal technology.</p> <p>Proof of performance test reports, supervision mission reports.</p> <p>Hazardous waste manifests and disposal certificates for POPs stockpiles.</p> <p>Hazardous waste manifests and disposal certificates for PCBs.</p> <p>Analytical reports for</p>	<p>4) To ensure that PCB inventory will be effective, early involvement of potential PCB owners will be established at project inception.</p> <p>5) To ensure a reliable inventory of POPs stockpile, the Pakistan Agricultural Research Council as well as the relevant provincial institutions will be involved.</p> <p>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</p>

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
		BAT/BEP regulation by cement kiln incineration at Lafarge cement plant		PCBs contaminated oil before and after treatment.	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.	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

TOTAL BUDGET AND WORKPLAN

Award ID:	00081936	Project ID(s):	00091045
Award Title:	Comprehensive reduction and elimination of Persistent Organic Pollutants in Pakistan		
Business Unit:	PAK10		
Project Title:	Comprehensive reduction and elimination of Persistent Organic Pollutants in Pakistan		
PIMS no.	4600		
Implementing Partner (Executing Agency)	Pakistan Climate Change Division (CCD, Cabinet Secretariat, Previously Ministry of Environment)		

GEF Outcome/Atlas Activity	Responsible Party/Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	Budget note
COMPONENT 1: Development and implementation of a Regulatory, Policy and enforcement system to reduce POPs releases	CCD	62000	GEF	71200	International Consultants	13200	36000	36000	10080	6720	102000	1
				71300	Local Consultants	28200	36000	36000	31080	20720	152000	2
				72100	Contractual services	12000	24000	24000	24000	16000	100000	4
				75700	Training, workshop and conferences	9600	24000	24000	5040	3360	66000	5
				71600	Travel	4800	6000	6000	7920	5280	30000	3
				74500	Miscellaneous	6000	12000	12000	12000	8000	50000	6
					Total Outcome 1	73800	138000	138000	90120	60080	500000	
OUTCOME 2: Capacity building of local communities and public and private sector stakeholders to reduce exposure to and releases of POPs.	CCD	62000	GEF	71200	International Consultants	7500	15000	22500	15000	15000	75000	1
				71300	Local Consultants	11300	45200	33900	22600	0	113000	2
				72100	Contractual services	17400	69600	52200	34800	0	174000	4
				75700	Training, workshop and conferences	0	7500	7500	7500	7500	30000	5
				71600	Travel	1800	3600	5400	3600	3600	18000	3
				74500	Miscellaneous	8000	8000	8000	8000	8000	40000	6
					Total Outcome 2	46000	148900	129500	91500	34100	450000	
OUTCOME 3:	CCD	62000	GEF	71200	International Consultants	50000	75000	50000	50000	25000	250000	1

Collection, Transport and Disposal of PCBs and POPS Pesticides				71300	Local Consultants	40000	60000	40000	40000	20000	200000	2
				72100	Contractual services	435000	580000	870000	580000	435000	2900000	4
				75700	Training, workshop and conferences	14000	28000	42000	28000	28000	140000	5
				71600	Travel	18000	18000	18000	18000	18000	90000	3
				74500	Miscellaneous	12000	16000	24000	16000	12000	80000	6
					Total Outcome 3	569000	777000	1044000	732000	538000	3660000	
OUTCOME 4: MONITORING, LEARNING, ADAPTIVE FEEDBACK & EVALUATION	CCD	62000	GEF	71200	International Consultants	0	40000	0	0	40000	80000	1
				71300	Local Consultants	0	30000	0	0	30000	60000	2
				72500	Supplies	0	30000	0	0	30000	60000	5
				75700	Training, workshop and conferences	10000	10000	10000	10000	10000	50000	4
				71600	Travel	0	15000	0	0	15000	30000	3
				74500	Miscellaneous	4000	4000	4000	4000	4000	20000	6
					Total Outcome 4	14000	129000	14000	14000	129000	300000	
Project management unit	CCD	62000	GEF	71300	Local Consultants	40000	40000	40000	40000	40000	200000	1
				71600	Travel	1500	1500	1500	1500	1500	7500	2
				72500	Supplies	1500	1500	1500	1500	1500	7500	3
	UNDP	62000	GEF	74599	UNDP cost recovery charges-bills	5000	5000	5000	5000	5000	25000	4
					Total Proj. Man.	48000	48000	48000	48000	48000	240000	
PROJECT TOTAL						750800	1240900	1373500	975620	809180	5150000	

Budget Notes:	
	Component 1 – Development and implementation of a Regulatory, Policy and enforcement system to reduce POPs releases
1	International consultants for assisting in policy formulation, compliance with international conventions, strategy development, updating of country chemical profile (\$700/day for 146 working days)
2	National consultants cost for policy formulation and revision, drafting of guidelines, central and provincial training, updating of country chemical profile, provide technical assistance to the Project Management Unit (\$200/day for 760 working days).
3	Pro-rata travel costs for international, national consultants and project staff at established travel, DSA and terminal allowance rates; international knowledge exchange for senior CCD, Provincial/Municipality staff, and training workshops for customs, electric power enterprises, owners of storage facilities as per outcome 1.2 and 1.3.

4	Contractual and professional services for indicative activities and outputs related to organisation and delivery of classroom / field training, development of training material, delivery of training equipment
5	Training of project and technical personnel, periodical and annual review and coordination meetings
6	Reserves for exchange loss, communication expenses, consumables, unforeseen expenses
Component 2 – Capacity building of local communities and public and private sector stakeholders to reduce exposure to and releases of POPs.	
1	International consultants and experts to develop guidance documents for the environmentally safe management of POPs and PCBs and provide training as per components 2.1, 2.2 and 2.3. (\$700/day for 107 working days)
2	National consultants and experts on awareness raising activities (outcome 2.1 and 2.3) , training on industrial sites (outcome 2.1 and 2.4), training in institutes and communities (outcome 2.3), provide technical assistance to the Project Management Unit, (\$200/day for 565 days)
3	Pro-rata travel costs for national and international consultants at established travel, DSA and terminal allowance rates, travel
4	Training on industrial sites (outcome 2.1 and 2.4), training in institutes and communities (outcome 2.3), Renting of conference halls, equipment and related services for training and conferences at national and provincial level
5	Contractual and professional services for indicative activities and outputs related to organisation and delivery of classroom / field training, development of training material, preparation, dissemination, delivery and broadcasting of awareness raising materials.
6	Reserves for exchange loss, communication expenses, consumables, unforeseen expenses
Component 3 – Collection, Transport and Disposal of PCBs and POPS Pesticides	
1	International consultants / experts for providing assistance to PCBs and POPs inventory update, provide knowledge on disposal technologies, drafting technical specification on all matters related to safe management and disposal of POPs and PCBs, provide assistance to international shipping of hazardous waste if necessary, on site supervising proof of performance testing and transport, storage and disposal of POPs and PCBs, provide on-site training on use of PPEs during handling of POPs and PCBs, (\$700day for 357 days)
2	National consultants / experts for updating inventory of PCBs and POPs, supervising all the handling and disposal operations of PCBs and POPs nationwide, drafting the national scheme for POPs disposal, design of safe storage facilities for POPs, provide technical assistance to the Project Management Unit (\$700/day for 1000 days)
3	<i>Pro-rata travel costs for international, national consultants and project staff at established travel, DSA and terminal allowance rates; international exchange for senior CCD and technical personnel at collection demonstration enterprises</i>
4	Training and exchange workshops on POPs and PCBs handling and disposal technologies , Renting of conference halls, equipment and related services for training and conferences at national and provincial level
5	Contractual services related to the delivery of handling and disposal services for 1200 t of POPs and 300 t of POPs pesticides, and delivery of related equipment as necessary
6	Unforeseen expenses
Component 4 - Project monitoring and evaluation	
1	The international consultant cost for conducting Mid-Term Review and Terminal Evaluation. (\$700/day for 114 working days)

2	(i) The national consultant cost for evaluation of project achievement of objectives and outcomes (\$200/day for 50 working days);
3	Pro-rata travel costs for international, national consultants and project staff at established travel, DSA and terminal allowance rates for regular M&E activities, Mid-Term Review and Terminal Evaluation.
4	Inception Workshop (Year 1 mandatory), Training of project and technical personnel, periodical and annual review and coordination meetings
5	Essential office supplies/materials for the establishment of National and Provincial Project Management Offices
6	Reserves for exchange loss, communication expenses, consumables, unforeseen expenses
Component 5 – Project Management	
1	(i) National Consultant: - part time National Project Director (\$1000/month for 30 months); (ii) National Consultant: Project Manager and financial assistance of the Project Management Unit (\$2000/m for 54months and \$1000/m for 54months)
2	Pro-rata travel costs for national consultants and project staff at established travel, DSA and terminal allowance rates for project management.
3	Office utilities and supply
4	UNDP cost recovery charges – please refer to more details in LOA – Annex B

Summary of Funds:⁷

	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Total
GEF	\$750,800	\$1,240,900	\$1,375,500	\$975,620	\$809,180	\$5,150,000
Donor 2 (e.g. UNDP)	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$300,000
Donor 3 (cash and in-kind) e.g. Government	\$6,786,966	\$6,786,964	\$6,786,964	\$6,786,964	\$6,786,964	\$33,934,822
TOTAL	\$7,597,766	\$8,087,864	\$8,222,464	\$7,822,584	\$7,656,144	\$39,384,822

⁷ Summary table should include all financing of all kinds: GEF financing, co-financing, cash, in-kind, etc...

Total Budget, Co-financing budget and incremental reasoning

Co-financed activities (certified by letters of committed co-financing)	Co-financing partner and co-financing amount in USD											Total Co-financing	GEF Grant	
	CCD	UNDP	Pesticide Residue Laboratory of the Soil & Plant Nutrition Directorate of the Agricultural Research Institute, Peshawar	Pesticide Residue Laboratory, Institute of Soil Chemistry and Environmental Science, Faisalabad	PESCO	PCRWR	PARC	LAFARGE	K-Electric	IESCO	ECI			BOND
ALL COMPONENTS (co-financing not related to a single specific project component to be shared amongst all the components)														
Personnel staff for various project activities	720,000			600,000			790,000		500,000	550,000	600,000			
Other related projects (detailed in co-financing letters)						210,000*		500,000*						
Use of office space, vehicles and other equipment for carrying out project related initiatives	400,000			600,000		30,000	500,000		750,000	31,000	500,000	30,612	7,311,612	
	Component 1. Development and implementation of a Regulatory, Policy and enforcement system to reduce POPs releases													
	<p>BASELINE: 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. 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.</p> <p>INCREMENTAL; Strengthened POPs regulatory and policy instruments adopted; Drafting of technical guidance documents POPs; 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; Governance and enforcement particularly on illegal imports framework for controlling POPs improved.</p>													
													0	500,000
Personnel staff														
Use of office space, vehicles and other equipment for carrying out project related initiatives														
	Component 2. Capacity building of local communities and public and private sector stakeholders to reduce exposure to and releases of POPs											2,403,367	450,000	

	<p>BASILINE: A number of laboratories have been established by the federal government in the country. 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.</p> <p>INCREMENTAL: Capacity to undertake POPs disposal projects at provincial level established. POPs pesticide storage and transformer reclamation centers upgraded to prevent dispersion of PCBs. Pilot inventory of PCBs carried out. Proof of Performance testing of the disposal facility. Environmentally Sound Disposal of POPs. Removal of particularly risky POPs stockpiles and the sound disposal of up 1200 tonnes of POP pesticides and of 300 tons of PCB. National POPs management (disposal) scheme developed</p>													
Classroom, computers, beamers and other equipment for training and raising awareness initiatives	250,000			300,000					600,000	31,000	300,000	50,000		
Personel staff		300,000*			100,000								18,367	
Training	250,000			100,000						4,000	100,000			
	<p>Component 3.Collection, Transport and Disposal of PCBs and POPS Pesticides</p> <p>BASILINE: The distribution companies (DISCOs) are expanding its transformer replacement program. Only recently some of the distribution companies (DISCO) decided to place specific restriction against PCB containing transformers. 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. 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 oil have not been identified yet</p> <p>INCREMENTAL: Capacity to undertake POPs disposal projects at provincial level established. POPs pesticide storage and transformer reclamation centers upgraded to prevent dispersion of PCBs. Pilot inventory of PCBs carried out. Proof of Performance testing of the disposal facility. Environmentally Sound Disposal of POPs. Removal of particularly risky POPs stockpiles and the sound disposal of up 1200 tonnes of POP pesticides and of 300 tons of PCB. National POPs management (disposal) scheme developed</p>											24,519,843	3,660,000	
Investment related to the improvement of facilities for the temporary storage of POPs stockpiles (POPs pesticides or PCBs)				225,000*	1,000,000*		300,000*	200,000*	600,000*		125,000*	204,081*		
Sampling and analysis of PCB						10,000			400,000					
Land for the establishment of safe storage and management of POPs contaminated materials				150,000					1,000,000	150,000	150,000	408,162		
Awareness raising	450,000			125,000	1,000,000		100,000				125,000			

Investment related to the upgrade / establishment of systems for the safe disposal of POPs substances									300,000*	900,000*				50,000*
Replacement of obsolete transformers										250,000	7,140,000			
Investment on capacity building in term of analytical facilities and trained manpower			400,000			200,000	500,000							
Personnel dedicated to specific activities for these component, as from co-financing letters			600,000		1,000,000	147,600	1,000,000							
Investment in infrastructures including lab facilities				1,800,000*			1,300,000*			2,000,000				
Reporting and documentation				100,000			10,000						100,000	
Component 4: Monitoring, Learning, Adaptive Feedback & evaluation														
Baseline: not relevant for M&E														
INCREMENTAL; Project monitoring throughout the whole project duration; midterm and terminal evaluation conducted by independent national and international evaluation experts														
													0	300,000
Project Management Unit													0	240,000
Total co-financing	2,070,000	300,000	1,000,000	4,000,000	3,100,000	597,600	4,500,000	1,000,000	7,000,000	7,906,000	2,000,000	761,222	34,234,822	5,150,000

*Cash contribution

IV. MANAGEMENT ARRANGEMENTS

The project will be executed in accordance with the National Implementation Modality (NIM) agreed between the Government of Pakistan and UNDP.

At the time of formation of steering committee of the project, due representation of relevant departments from other provinces will be ensured to comply with the devolution of power recently established by the Government of Pakistan. To access all the important sources of POPs pesticides and PCBs, project offices at the provincial level with reasonable operating capacity as well as field offices in the major districts will be established. Regular interaction of these offices with the relevant line agencies of the government will be ensured.

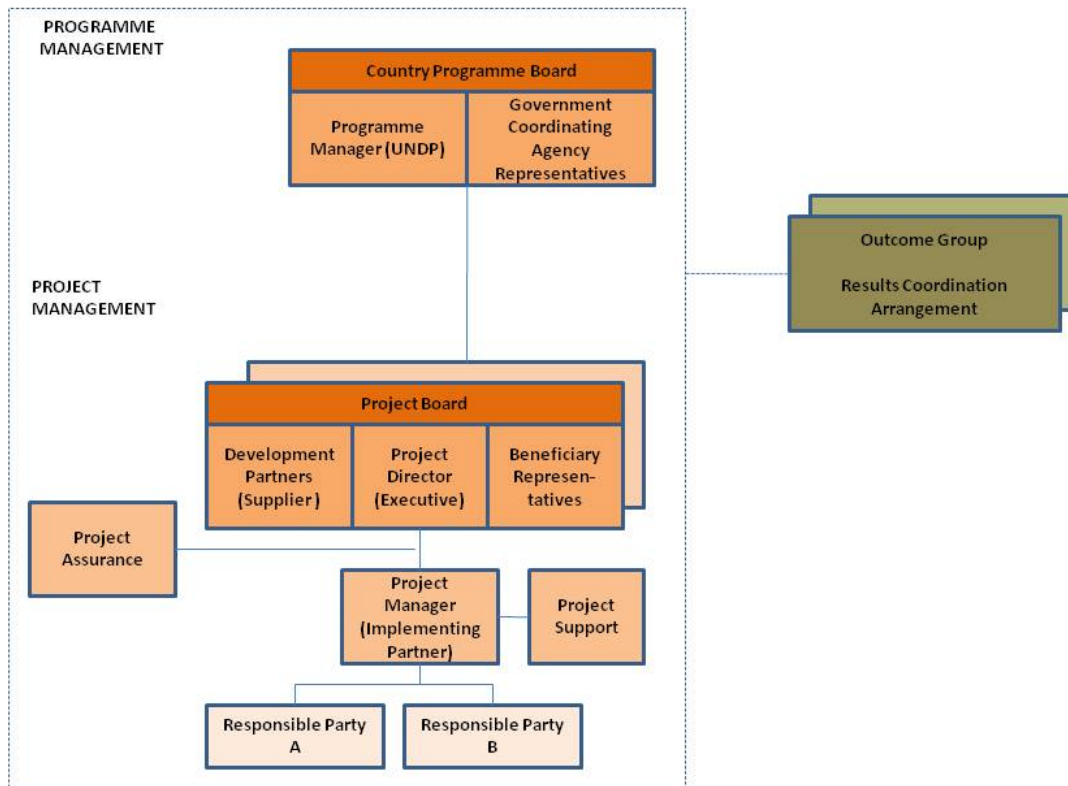
A well designed communication policy will be adopted by the project for effective flow of information, media projection and to have timely access to the end users. Diversified channels of communication based on Information Communication Technologies (ICTs) will be adopted for dissemination of project information. Especially the public sector organizations will be followed up for adopting and being used to with the ICTs for multiple interaction with other partner organizations related to project matters.

Under the established project organogram, each agency, partner and personnel will be accountable in accordance with their TORs. The decision-making parameters will be clearly defined as to whom, how and when to report for taking the decisions about any issues.

Soon after the project inception workshop, the project will formulate a detailed action plan based on identified project activities with definite timelines, responsibilities, deadlines, possible risks and mitigation strategies.

Having said the above, the following management structure, as summarized below, is envisaged:

The project structure is represented in the figure below.



Implementing Partner. : CCD (Climate Change Division of the Government of Pakistan) will be the implementing partner for this project.

During the project's implementation, the Implementing Partner is accountable for:

- managing UNDP resources to achieve the expected results specified in the project document, in accordance with the government financial rules and regulations to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP;
- maintaining an up-to-date accounting system to ensure accuracy and reliability of financial reporting; and,
- providing expenditure reports to UNDP on a quarterly basis (or more frequently as appropriate).

Project Board. Outside direction and oversight will be provided by a Project Board consisting of the National Project Director - a senior-level representative of the CCD- as well as senior representatives of the Ministries, relevant stakeholders, UNDP, NGOs, the chairpersons of the local project advisory groups as well as UNDP. This committee will provide management decisions when guidance is required by the Project Manager. The Project Steering Committee will also have final authority on matters requiring official review and approval, including annual work plans, budgets, and key hires.

For engaging of the local stakeholders and communities Regional Project Advisory Boards will be established in provincial pilot areas working on project components 2 and 3. The Project Advisory Boards

will be called by the local government in (list provinces) and will comprise of representatives from local government, NGOs and relevant stakeholders.

The Project Board will include:

- 1) A national project director appointed by CCD, which is project implementation institution;
- 2) A representative from UNDP,
- 3) Representatives from Main project Beneficiaries.

Specific responsibilities of the project steering committee will be as following:

Initiating the project

- Agree on Project Manager's responsibilities, as well as the responsibilities of the other members of the Project Management Unit (PMU);
- Delegate any Project Assurance function as appropriate;
- Review the Inception report and first Annual Workplan;
- Review and appraise detailed Project Plan and AWP, including Atlas reports covering activity definition, quality criteria, issue log, updated risk log and the monitoring and communication plan.

Running the project

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the Project Manager;
- Provide guidance and agree on possible countermeasures/management actions to address specific risks;
- Agree on Project Manager's tolerances in the Annual Work Plan and quarterly plans when required;
- Conduct regular meetings to review the Project Quarterly Progress Report and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans.
- Review Combined Delivery Reports (CDR) prior to certification by the Implementing Partner;
- Appraise the Project Annual Review Report, make recommendations for the next AWP, and inform the Outcome Board about the results of the review.
- Review and approve end project report, make recommendations for follow-on actions;
- Provide ad-hoc direction and advice for exception situations when project manager's tolerances are exceeded;
- Assess and decide on project changes through revisions;

Closing a project

- Assure that all Project deliverables have been produced satisfactorily;
- Review and approve the Final Project Review Report, including Lessons-learned;
- Make recommendations for follow-on actions to be submitted to the Outcome Board;
- Commission project evaluation (only when required by partnership agreement)
- Notify operational completion of the project to the Outcome Board.

Project Management Unit. The day-to-day activities of the project will be carried out by Project Management Unit composed by a full-time Project Manager, a full-time Project/Financial Assistant and a full time Technical Advisor, to be hired immediately upon project initiation. They will work under the support and direct oversight of CCD. National and international consultant services, including the contracted services of firms as well as individuals, will be engaged across all components in various

technical areas, including policy and standards development, waste management program development and implementation, training, awareness raising, project design, implementation, and evaluation.

Implementing Agency. UNDP will act as GEF Implementing Agency for this Project. The project builds on UNDP's strong experience in the region with promoting environmental protection, and building capacity of governmental organizations and the general public. UNDP has conducted recent projects in Pakistan and in the region in diverse environment subject areas, including climate change; renewable energy; REDD; biodiversity protection; disaster risk reduction; integrated water resources management and sustainable land management; and chemicals management.

UNDP also supports national partners in areas related to inclusive development, democratic governance and other areas.

During the project's implementation, the UNDP is responsible for the following tasks:

- monitoring the project's progress towards intended outputs;
- monitoring to ensure that resources entrusted to UNDP are utilized appropriately;
- ensuring national ownership, ongoing stakeholder engagement and sustainability;
- ensuring that the project's outputs contribute to intended country programme outcomes;
- participating in the project management board; and,
- reporting on progress to donors and to UNDP through corporate reporting mechanisms.

Implementation Modality. The project will be executed through the National Implementation Modality (NIM) following all relevant Government regulations. The signed Project Document will serve as the Grant Agreement between the CCD and UNDP. CCD should register the project following the appropriate mechanism and will request Ministry of Finance to open a project bank account. To expedite the start of the initial activities, CCD will request support services from UNDP allowing UNDP to undertake agreed project activities.

Cash transfers will be according to the UN Harmonized Approach to Cash Transfers (HACT). The UNDP will conduct the HACT before the NIM implementation. The Micro-assessment will review the CCD to identify the appropriate modality for sound financial and administrative management of the project.

At country / project level, fund management will use the government mechanism. Other arrangements not specified in the project will be based on applicable rules and regulations of GoP and the relevant UNDP financial rules and regulations, in consultation with the PEB.

UNDP's Country Office in Pakistan will be responsible for ensuring transparency, appropriate conduct and financial responsibility. This office will oversee annual financial audits, as well as the execution of independent Project Midterm and Terminal Evaluations. All financial transactions and agreements, including contracts with staff and consultants, will follow the rules and regulations of UNDP. The UNDP Regional Coordinating Unit will provide regular programmatic and administrative oversight as well.

V. MONITORING FRAMEWORK AND EVALUATION

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

Project start:

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:

- a) 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.
- b) 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.
- c) 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.
- d) Discuss financial reporting procedures and obligations, and arrangements for annual audit.
- e) 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:

- Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
- 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).
- Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- 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:

- 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.

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:

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:

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 \(ERC\)](#).

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

End of Project:

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.

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 \(ERC\)](#).

The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

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:

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

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 through lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

Communications and visibility requirements:

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>.

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.

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

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
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: 30,000	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)	

VI. LEGAL CONTEXT

This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBAA [or other appropriate governing agreement] and all CPAP provisions apply to this document.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

If the country has not signed the SBAA, the following standard text must be quoted:

This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together the instrument envisaged in the [Supplemental Provisions](#) to the Project Document, attached hereto.

Consistent with the above Supplemental Provisions, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

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Audit clause

The GOP will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the

Programming and Finance manuals. The audit will be conducted according to UNDP's financial regulations, rules, and audit policies by the legally recognized auditor of the GOP, or by a commercial auditor engaged by the GOP.

VII. ANNEXES

Annex A. Risk Analysis.

Risk		Risk Mitigation Measure
<p>Risks:</p> <ol style="list-style-type: none"> 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. 	L	<ol style="list-style-type: none"> 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. 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. 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, 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. 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>Risks:</p> <ol style="list-style-type: none"> 1) Stakeholders and interest groups not properly identified; 2) Awareness and training program not properly targeted to the audience 3) Enterprises may not be committed to send their personnel for training or workers not allowed / not willing to leave the job for 	L	<ol style="list-style-type: none"> 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 carried out by stakeholders. 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.

Risk		Risk Mitigation Measure
the duration of the training.		
Safety issues in some areas of Pakistan	L	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 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	

Annex B. Letter of Agreement for Direct Project Services

STANDARD LETTER OF AGREEMENT BETWEEN UNDP AND CLIMATE CHANGE DIVISION FOR THE PROVISION OF SUPPORT SERVICES

Dear Mr. Iftikhar UI Hasan Gilani,

1. Reference is made to consultations between officials of the Government of Pakistan (hereinafter referred to as “the Government”) and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the relevant programme support document or project document, as described below.

2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.

3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the programme/project:

- (a) Identification and/or recruitment of project and programme personnel;
- (b) Identification and facilitation of training activities;
- (c) Procurement of goods and services;

4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the programme support document or project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a programme or project,

the annex to the programme support document or project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.

5. The relevant provisions of the Joint note on the Management of the National Execution Modality in Pakistan that was signed on 11-07-2001, including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the programme support document or project document.

6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the Joint note on the Management of the National Execution Modality in Pakistan.

7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the programme support document or project document.

8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.

9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

10. If you are in agreement with the provisions set forth above, please sign and return to this office two signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,

For the Government

Mr. Iftikhar UL Hasan Shah Gilani,
Joint Secretary (International Cooperation)

Dated: _____

Signed on behalf of UNDP

Ms. Tracy Vienings
Deputy Country Director (P)

Dated: _____

DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. Reference is made to consultations between Climate Change Division, the institution designated by the Government of Pakistan and officials of UNDP with respect to the provision of support services by the UNDP country office for the nationally managed project titled 'Comprehensive reduction and Elimination of Persistent Organic Pollutants in Pakistan, "the Project".

2. In accordance with the provisions of the letter of agreement signed on 13-06-2014 and the project document, the UNDP country office shall provide support services for the Project as described below.

3. Support services to be provided:

Support services (insert description)	Schedule for the provision of the support services	Cost to UNDP of providing such support services (where appropriate)	Amount and method of reimbursement of UNDP (where appropriate)
1. Recruitment of Project staff, international and national consultants to support the implementation of the project	Jan-Sep 2015	As per UPL/ Actual cost	As per UPL/ Actual cost
3. Technical support for organizing the consultative meetings on formulation of policy, evolving legal framework and developing regulatory mechanism for POPs pesticides and PCBs between CCD and other relevant line ministries, CSOs, academic & research institutions as well as establishing the technical working groups for analyzing the existing laws and undertaking new legislation.	Jan-Sep 2015	As per UPL/ Actual cost	As per UPL/ Actual cost
4. Procurement of goods and services related to equipment, stationery, furniture, transport, hiring of resource persons and development of training resources such as manuals, posters, video documentaries, etc.	June 2015 – Dec 2016	As per UPL/ Actual cost	As per UPL/ Actual cost
Total (USD)			25,000

4. Description of functions and responsibilities of the parties involved:

Annex C. Terms of References for project staff

Project Title	Comprehensive reduction and elimination of Persistent Organic Pollutants in Pakistan
Title	National Project Director
Contractual Modality	Part time.
Duty Station	Islamabad with travels within Pakistan
Supervision	Government of Pakistan, Climate Change Division,

Duties and responsibilities

Overall, the NPD will be accountable to both the Government and the UNDP. The main duties and responsibilities are:

- Ensures that the expected results of the project are of satisfactory, substantive quality and that they contribute to the achievement of the intended outcome identified in the UNDP Country Programme Document (CPD). This will be discharged through the (i) approval of project work plans, TORs, reports, (ii) follow-up on the implementation of recommendations made by regular project reviews and/or external evaluations, and (iii) conduct of internal reviews and evaluations as/if needed.
- Ensures that project resources, national as well as international, are effectively utilized for their intended purposes through the (i) verification of project budgets and payments, (ii) approval of budget revisions within the agency flexibility limit, (iii) follow-up on the implementation of recommendations made by external audits and (iv) conduct of internal audits as/if needed.
- Ensures that counterpart funds are made available by the Implementing Partner in sufficient quantities and in a timely manner to support project implementation.
- Ensures that project parties, particularly national parties (including the Implementing Partner) fully participate in project implementation, effectively collaborate in project activities and duly benefit from project results.
- Ensures that the results achieved and lessons learned by the project are properly documented, proactively disseminated to and duly shared with all project parties, particularly national parties.
- Selects, arranges for the appointment of and supervises the Project Manager, in consultation with UNDP, to make sure that the PC and other national project staff are empowered to effectively perform their day-to-day project duties.
- Selects, arranges for the appointment of International Consultants, in consultation with UNDP, to make sure that international project personnel contribute expert inputs of the highest quality to the expected outputs of the project.
- Represents the Implementing Partner at major project reviews, evaluations, audits and other important events.
- Provide regular updates to the PSC.

Project Title	Comprehensive reduction and elimination of Persistent Organic Pollutants in Pakistan
Title	Technical Advisor of the Project Management Unit
Contractual Modality	Full time – one year renewable up to 5 years.
Duty Station	Islamabad with travels within Pakistan
Supervision	PMU Project Manager

Duties and responsibilities

This assignment is for a full time PMU Technical Advisor who will be recruited with the objective to provide PMU with technical assistance and advice on all the activities to be carried out under the Project, to help on routine technical coordination and supervision and to prepare or assist in the preparation of relevant project documentation and training materials. The TA will work under overall supervision of Project Manager.

The Technical Advisor will, in general, be responsible for:

1. Assisting PMU in drafting the inception report of the project;
2. Assisting PMU in overall technical management and coordination of all project activities;
3. Technical support to PMU on the supervision of all the technical activities related to institutional strengthening, policy framework, POPs and PCB management and disposal, project monitoring and evaluation, and replication program development;
4. Technical support to PMU in participating in meetings with UNDP and the CCD;
5. Technical support to PMU in coordinating the work of international consultants;
6. Providing comments on project implementation progress at different stages;
7. Assisting PMU in drafting Term of References for all the services and equipment to be procured under the project;
8. Assisting PMU in drafting technical reports and management reports like the Project Implementation Reports, (PIR), Annual and Quarterly Progress Reports (APR, QPR) and Annual and Quarterly Workplans (AWP, QWP);
9. Assist PMU in drafting minutes of the meetings with special reference to the technical part;
10. Perform site visits and inspections at project implementation sites during various implementation stages (storage facilities, PCB reclamation workshops, disposal facilities, trainings)
11. Provide comments on the reports related to the technical activities and review the related plan under the Project to ensure their technical feasibility and most appropriate measures and actions taken.
12. Supervise the work of local waste treatment companies that will undertake POPs disposal activities to guarantee the quality and consistency of the reports and deliverables, and help them finalize reports before their dissemination to concerned parties;
13. Timely and proactively provide recommendation for the improvement of all project activities.

Duration of this assignment, duty station and expected places of travel

This is a full time assignment of the duration of one year. The contract may be renewed yearly for maximum 5 years (the duration of the Project) on the basis of the satisfactory evaluation of the performance of the work carried out by the technical advisor in the preceding year.

The Technical Advisor will work at the PMU office to be established in Islamabad.

The Technical Advisor is expected to travel within the country at the implementation sites, to supervise project implementation activities. The exact number of travels will be specified in the course of project implementation based on project needs. Travel and subsistence during travel will be paid by the project.

Deliverables

The following deliverables will be submitted to the PMU by the Technical Advisor:

- Short quarterly work-plan of the activities to be carried out under this assignment;
- Draft Inception report of the Project;
- Quarterly reports of the activities carried out under this assignment (three reports per year);
- Comments reports and supervision reports as relevant for the different project activities;
- Draft TORs for the required project activities;
- Draft PIR, APR, QPR, AWP, QWP
- Mission report and debriefing for the field visit;
- Meeting minutes, with special reference to the technical parts.

Required qualifications

The Technical Advisor shall have as a minimum the following qualifications:

- Advanced degree (Master of Science as a minimum) in Engineering, Industrial Chemistry, Environmental Science, Biology.
- Sound experience on POPs and Stockholm Convention,
- At least 5 year experience in the field of chemical risk assessment, or in projects related to the implementation of Stockholm Convention on POPs, or in the management of hazardous chemicals and waste;
- Previous experience as supervisor / technical advisor in projects related to environmental protection or hazardous waste management;
- Previous experience in the implementation or supervision of projects related to the management and disposal of POPs or PCBs is an asset.

In addition, the technical advisor should be independent and should not have any personal interest related to project activities which may hinder its independency and which may distort or bias his performance.

Project Title	Comprehensive reduction and elimination of Persistent Organic Pollutants in Pakistan
Consultancy Title	Project Manager of the Project Management Unit
Contractual Modality	Full time – one year renewable up to 5 years.
Duty Station	Islamabad with travels within Pakistan
Supervision	PSC National Project Director

Duties and responsibilities

Overall, the PC will be responsible for the day-to-day running of the project, including overall coordination, planning, management, implementation, monitoring & evaluation and reporting of all project activities:

1. Prepare and update project work plans, and submits these to the NPD and UNDP for clearance.
2. Participate in quarterly work planning and progress reporting meetings with the NPD, PMU, and UNDP;
3. Ensure that all agreements with implementing agencies are prepared, negotiated and agreed upon.
4. Prepare TORs for key inputs (i.e. personnel, sub-contracts, training, and procurement) and submits these to the NPD and UNDP for clearance, and administers the mobilization of such inputs.
5. With respect to external project implementing agencies/ sub-contractors:
 - a. ensuring that these agencies mobilize and deliver the inputs in accordance with their letters of agreement or contracts, and
 - b. providing overall supervision and/or coordination of their work to ensure the production of the expected outputs.
6. Assume direct responsibility for managing the project budget by ensuring that:
 - a. project funds are made available when needed, and are disbursed properly,
 - b. expenditures are in accordance with the project document and/or existing project work plan,
 - c. accounting records and supporting documents are properly kept,
 - d. required financial reports are prepared,
 - e. financial operations are transparent and financial procedures/regulations for NEX projects are properly applied; and
 - f. S/he is ready to stand up to audits at any time.
7. Assume direct responsibility for managing the physical resources (e.g. vehicles, office equipment, and furniture) provided to the project by UNDP.
8. Supervise the project staff and local or international short-term experts/consultants working for the project.

9. Prepare project progress reports of various types and the Final Project Report as scheduled, and organizes review meetings and evaluation missions in coordination with UNDP.
10. Report regularly to and keeps the NPD and UNDP PO up-to-date on project progress and problems.

Required Qualifications

University degree (preferably post-graduate degree) in environment management, chemicals or related fields;

Knowledge of Result-based management and at least 5 years of experience in project management and implementation;

Strong analytical skills, good inter-personal and team building skills – Leading skills;

Full time availability for project management duties;

Working level of English language is an absolute necessity;

Familiarity with technical assistance projects and UNDP programme in Pakistan is an asset.

Project Title	Comprehensive reduction and elimination of Persistent Organic Pollutants in Pakistan
Title	Financial Assistant of the Project Management Unit
Contractual Modality	Full time – one year renewable up to 5 years.
Duty Station	Islamabad with travels within Pakistan
Supervision	PMU Project Manager and PSC National Project Director

Duties and responsibilities

This Financial Assistant Position has two roles: as an Administrative Assistant and as an Accountant with the following duties:

a. As a Project Administrator

1. Provide assistance in the operational management of the project according to the project document and the NEX procedures.
2. Undertake all preparation work for procurement of office equipment, stationeries and support facilities as required;
3. Provide support in preparing project events, including workshops, meetings (monthly, quarterly and annual), study tours, trainings, etc., as required.
4. Take care of project telephone, fax, and email system;
5. Assist with preparation of TORs and contracts for consultants for project activities.

b. As a Project Accountant

1. Prepare quarterly advance requests to get advance funds from UNDP in the format applicable.
2. Assist the PC and NPD in project budget monitoring and project budget revision.
3. Set up accounting system, including reporting forms and filling system for the project, in accordance with the project document and the NEX procedures;
4. Maintain petty cash transactions. This includes writing of receipts, preparation of payment request form, receipt and disbursement of cash and clearance of advances;
5. Prepare cheques and withdraw money from the bank;
6. Prepare project financial reports and submit to PC and NPD for clearance and furnish to UNDP as required;
7. Enter financial transactions into the computerised accounting system;
8. Reconcile all balance sheet accounts and keep a file of all completed reconciliation;
9. Check and ensure that all expenditures of projects are in accordance with NEX procedures. This includes ensuring receipts to be obtained for all payments;
10. Check budget lines to ensure that all transactions are booked to the correct budget lines;
11. Ensure documentation relating to payments are duly approved by the NPD;
12. Bring any actual or potential problems to the attention of the NPD;
13. Follow up bank transfers. This includes preparing the bank transfer requests, submitting them to the bank and keeping track of the transfers;
14. Ensure Petty Cash to be reviewed and updated ensuring that there is up-to-date records;
15. To continuously improve system & procedures to enhance internal controls to satisfy audit requirements.
16. Ensure that bank statements be collected from the banks on the 2nd working day of each month;
17. Ensure that bank accounts should be reconciled and reported on or before 3rd of each month;

18. Prepare monthly bank reconciliation statement, including computation of interests gained to be included into reports.
19. Maintain the inventory file to support purchases of all equipment/assets.
20. Undertake other relevant matters assigned by the NPD.

Required Qualifications

- University degree in accounting, finance or related fields;
- Solid experience of budgeting, planning and reporting on foreign funded projects; and experience with international auditing requirements.
- Good secretarial skills and good organizational capacity;
- Knowledge in administrative and accounting procedures of the Government
- Good computer skills in common word processing (MS Word), spreadsheet (MS Excel), and accounting software.
- Appropriate English language skills, both spoken and written.

Annex D. Environmental Social Screening

UNDP Environmental and Social Screening Template

(December 2012)

QUESTION 1:

Has a combined environmental and social assessment/review that covers the proposed project already been completed by implementing partners or donor(s)?

Select answer below and follow instructions:

→NO: Continue to Question 2 (do not fill out Table 1.1)

→YES: No further environmental and social review is required if the existing documentation meets UNDP's quality assurance standards, and environmental and social management recommendations are integrated into the project. Therefore, you should undertake the following steps to complete the screening process:

1. Use Table 1.1 below to assess existing documentation. (It is recommended that this assessment be undertaken jointly by the Project Developer and other relevant Focal Points in the office or Bureau).
2. Ensure that the Project Document incorporates the recommendations made in the implementing partner's environmental and social review.
3. Summarize the relevant information contained in the implementing partner's environmental and social review in Annex A.2 of this Screening Template, selecting Category 1.
4. Submit Annex A to the PAC, along with other relevant documentation.

Note: Further guidance on the use of national systems for environmental and social assessment can be found in the UNDP ESSP Annex B.

TABLE 1.1: CHECKLIST FOR APPRAISING QUALITY ASSURANCE OF EXISTING ENVIRONMENTAL AND SOCIAL ASSESSMENT	Yes/No
1. Does the assessment/review meet its terms of reference, both procedurally and substantively?	
2. Does the assessment/review provide a satisfactory assessment of the proposed project?	
3. Does the assessment/review contain the information required for decision-making?	
4. Does the assessment/review describe specific environmental and social management measures (e.g. mitigation, monitoring, advocacy, and capacity development measures)?	
5. Does the assessment/review identify capacity needs of the institutions responsible for implementing environmental and social management issues?	
6. Was the assessment/review developed through a consultative process with strong stakeholder engagement, including the view of men and women?	

7. Does the assessment/review assess the adequacy of the cost of and financing arrangements for environmental and social management issues?	
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Table 1.1 (continued) For any “no” answers, describe below how the issue has been or will be resolved (e.g. amendments made or supplemental review conducted).	
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QUESTION 2:

Do all outputs and activities described in the Project Document fall within the following categories?

- Procurement (in which case UNDP's [Procurement Ethics](#) and [Environmental Procurement Guide](#) need to be complied with)
- Report preparation
- Training
- Event/workshop/meeting/conference (refer to [Green Meeting Guide](#))
- Communication and dissemination of results

Select answer below and follow instructions:

- NO** → Continue to Question 3
- YES** → No further environmental and social review required. Complete Annex A.2, selecting Category 1, and submit the completed template (Annex A) to the PAC.

QUESTION 3:

Does the proposed project include activities and outputs that support *upstream* planning processes that potentially pose environmental and social impacts or are vulnerable to environmental and social change (refer to Table 3.1 for examples)? (Note that *upstream* planning processes can occur at global, regional, national, local and sectoral levels)

Select the appropriate answer and follow instructions:

NO → Continue to Question 4.

YES → Conduct the following steps to complete the screening process:

1. Adjust the project design as needed to incorporate UNDP support to the country(ies), to ensure that environmental and social issues are appropriately considered during the upstream planning process. Refer to Section 7 of this Guidance for elaboration of environmental and social mainstreaming services, tools, guidance and approaches that may be used.
2. Summarize environmental and social mainstreaming support in Annex A.2, Section C of the Screening Template and select "Category 2".
3. If the proposed project ONLY includes upstream planning processes then screening is complete, and you should submit the completed Environmental and Social Screening Template (Annex A) to the PAC. If downstream implementation activities are also included in the project then continue to Question 4.

TABLE 3.1 EXAMPLES OF UPSTREAM PLANNING PROCESSES WITH POTENTIAL DOWNSTREAM ENVIRONMENTAL AND SOCIAL IMPACTS		Check appropriate box(es) below
1.	Support for the elaboration or revision of global-level strategies, policies, plans, and programmes. <i>For example, capacity development and support related to international negotiations and agreements. Other examples might include a global water governance project or a global MDG project.</i>	NO
2.	Support for the elaboration or revision of regional-level strategies, policies and plans, and programmes. <i>For example, capacity development and support related to transboundary programmes and planning (river basin management, migration, international waters, energy development and access, climate change adaptation etc.).</i>	NO
3.	Support for the elaboration or revision of national-level strategies, policies, plans and programmes. <i>For example, capacity development and support related to national development policies, plans, strategies and budgets, MDG-based plans and strategies (e.g. PRS/PRSPs, NAMAs), sector plans.</i>	YES
4.	Support for the elaboration or revision of sub-national/local-level strategies, policies, plans and programmes. <i>For example, capacity development and support for district and local level development plans and regulatory frameworks, urban plans, land use development plans, sector plans, provincial development plans, provision of services, investment funds, technical guidelines and methods, stakeholder engagement.</i>	YES

QUESTION 4:

Does the proposed project include the implementation of *downstream* activities that potentially pose environmental and social impacts or are vulnerable to environmental and social change?

To answer this question, you should first complete Table 4.1 by selecting appropriate answers. If you answer “No” or “Not Applicable” to all questions in Table 4.1 then the answer to Question 4 is “NO.” If you answer “Yes” to any questions in Table 4.1 (even one “Yes” can indicated a significant issue that needs to be addressed through further review and management) then the answer to Question 4 is “YES”:

NO → No further environmental and social review and management required for downstream activities. Complete Annex A.2 by selecting “Category 1”, and submit the Environmental and Social Screening Template to the PAC.

YES → Conduct the following steps to complete the screening process:

1. Consult Section 8 of this Guidance, to determine the extent of further environmental and social review and management that might be required for the project.
2. Revise the Project Document to incorporate environmental and social management measures. Where further environmental and social review and management activity cannot be undertaken prior to the PAC, a plan for undertaking such review and management activity within an acceptable period of time, post-PAC approval (e.g. as the first phase of the project) should be outlined in Annex A.2.
3. Select “Category 3” in Annex A.2, and submit the completed Environmental and Social Screening Template (Annex A) and relevant documentation to the PAC.

TABLE 4.1: ADDITIONAL SCREENING QUESTIONS TO DETERMINE THE NEED AND POSSIBLE EXTENT OF FURTHER ENVIRONMENTAL AND SOCIAL REVIEW AND MANAGEMENT

1. Biodiversity and Natural Resources	Answer (Yes/No/ Not Applicable)
1.1 Would the proposed project result in the conversion or degradation of modified habitat , natural habitat or critical habitat ?	NO
1.2 Are any development activities proposed within a legally protected area (e.g. natural reserve, national park) for the protection or conservation of biodiversity?	NO
1.3 Would the proposed project pose a risk of introducing invasive alien species?	NO
1.4 Does the project involve natural forest harvesting or plantation development without an independent forest certification system for sustainable forest management (e.g. <i>PEFC</i> , <i>the Forest Stewardship Council certification systems</i> , or <i>processes established or accepted by the relevant National Environmental Authority</i>)?	NO
1.5 Does the project involve the production and harvesting of fish populations or other aquatic species without an accepted system of independent certification to ensure sustainability (e.g. <i>the Marine Stewardship Council certification system</i> , or <i>certifications, standards, or processes established or accepted by the relevant National Environmental Authority</i>)?	NO

TABLE 4.1: ADDITIONAL SCREENING QUESTIONS TO DETERMINE THE NEED AND POSSIBLE EXTENT OF FURTHER ENVIRONMENTAL AND SOCIAL REVIEW AND MANAGEMENT		
1.6	Does the project involve significant extraction, diversion or containment of surface or ground water? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction.</i>	NO
1.7	Does the project pose a risk of degrading soils?	NO
2.	Pollution	Answer (Yes/No/ Not Applicable)
2.1	Would the proposed project result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and transboundary impacts?	NO
2.2	Would the proposed project result in the generation of waste that cannot be recovered, reused, or disposed of in an environmentally and socially sound manner?	NO
2.3	Will the propose project involve the manufacture, trade, release, and/or use of chemicals and hazardous materials subject to international action bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Convention on Persistent Organic Pollutants, or the Montreal Protocol.</i>	NO
2.4	Is there a potential for the release, in the environment, of hazardous materials resulting from their production, transportation, handling, storage and use for project activities?	YES
2.5	Will the proposed project involve the application of pesticides that have a known negative effect on the environment or human health?	NO
3.	Climate Change	
3.1	Will the proposed project result in significant ⁸ greenhouse gas emissions? <i>Annex E provides additional guidance for answering this question.</i>	NO
3.2	Is the proposed project likely to directly or indirectly increase environmental and social vulnerability to climate change now or in the future (also known as maladaptive practices)? You can refer to the additional guidance in Annex C to help you answer this question. <i>For example, a project that would involve indirectly removing mangroves from coastal zones or encouraging land use plans that would suggest building houses on floodplains could increase the surrounding population's vulnerability to climate change, specifically flooding.</i>	NO
4.	Social Equity and Equality	Answer (Yes/No/ Not Applicable)
4.1	Would the proposed project have environmental and social impacts that could affect indigenous people or other vulnerable groups?	NO
4.2	Is the project likely to significantly impact gender equality and women's empowerment ⁹ ?	NO

⁸ Significant corresponds to CO₂ emissions greater than 100,000 tons per year (from both direct and indirect sources). Annex E provides additional guidance on calculating potential amounts of CO₂ emissions.

TABLE 4.1: ADDITIONAL SCREENING QUESTIONS TO DETERMINE THE NEED AND POSSIBLE EXTENT OF FURTHER ENVIRONMENTAL AND SOCIAL REVIEW AND MANAGEMENT		
4.3	Is the proposed project likely to directly or indirectly increase social inequalities now or in the future?	NO
4.4	Will the proposed project have variable impacts on women and men, different ethnic groups, social classes?	NO
4.5	Have there been challenges in engaging women and other certain key groups of stakeholders in the project design process?	NO
4.6	Will the project have specific human rights implications for vulnerable groups?	NO
5. Demographics		
5.1	Is the project likely to result in a substantial influx of people into the affected community(ies)?	NO
5.2	Would the proposed project result in substantial voluntary or involuntary resettlement of populations? <i>For example, projects with environmental and social benefits (e.g. protected areas, climate change adaptation) that impact human settlements, and certain disadvantaged groups within these settlements in particular.</i>	NO
5.3	Would the proposed project lead to significant population density increase which could affect the environmental and social sustainability of the project? <i>For example, a project aiming at financing tourism infrastructure in a specific area (e.g. coastal zone, mountain) could lead to significant population density increase which could have serious environmental and social impacts (e.g. destruction of the area's ecology, noise pollution, waste management problems, greater work burden on women).</i>	NO
1. Culture		
6.1	Is the project likely to significantly affect the cultural traditions of affected communities, including gender-based roles?	NO
6.2	Will the proposed project result in physical interventions (during construction or implementation) that would affect areas that have known physical or cultural significance to indigenous groups and other communities with settled recognized cultural claims?	NO
6.3	Would the proposed project produce a physical "splintering" of a community? <i>For example, through the construction of a road, powerline, or dam that divides a community.</i>	NO
2. Health and Safety		
7.1	Would the proposed project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions? <i>For example, development projects located within a floodplain or landslide prone area.</i>	NO
7.2	Will the project result in increased health risks as a result of a change in living and working conditions? In particular, will it have the potential to lead to an increase in HIV/AIDS infection?	NO
7.3	Will the proposed project require additional health services including testing?	YES

⁹ Women are often more vulnerable than men to environmental degradation and resource scarcity. They typically have weaker and insecure rights to the resources they manage (especially land), and spend longer hours on collection of water, firewood, etc. (OECD, 2006). Women are also more often excluded from other social, economic, and political development processes.

TABLE 4.1: ADDITIONAL SCREENING QUESTIONS TO DETERMINE THE NEED AND POSSIBLE EXTENT OF FURTHER ENVIRONMENTAL AND SOCIAL REVIEW AND MANAGEMENT	
3. Socio-Economics	
8.1 Is the proposed project likely to have impacts that could affect women’s and men’s ability to use, develop and protect natural resources and other natural capital assets? <i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their development, livelihoods, and well-being?</i>	NO
8.2 Is the proposed project likely to significantly affect land tenure arrangements and/or traditional cultural ownership patterns?	NO
8.3 Is the proposed project likely to negatively affect the income levels or employment opportunities of vulnerable groups?	NO
9. Cumulative and/or Secondary Impacts	Answer (Yes/No/ Not Applicable)
9.1 Is the proposed project location subject to currently approved land use plans (e.g. roads, settlements) which could affect the environmental and social sustainability of the project? <i>For example, future plans for urban growth, industrial development, transportation infrastructure, etc.</i>	NO
9.2 Would the proposed project result in secondary or consequential development which could lead to environmental and social effects, or would it have potential to generate cumulative impacts with other known existing or planned activities in the area? <i>For example, a new road through forested land will generate direct environmental and social impacts through the cutting of forest and earthworks associated with construction and potential relocation of inhabitants. These are direct impacts. In addition, however, the new road would likely also bring new commercial and domestic development (houses, shops, businesses). In turn, these will generate indirect impacts. (Sometimes these are termed “secondary” or “consequential” impacts). Or if there are similar developments planned in the same forested area then cumulative impacts need to be considered.</i>	NO

ANNEX A.2: ENVIRONMENTAL AND SOCIAL SCREENING SUMMARY

(to be filled in after Annex A.1 has been completed)

Name of Proposed Project: Comprehensive Reduction and Elimination of Persistent Organic Pollutants in Pakistan

A. Environmental and Social Screening Outcome

Select from the following:

- Category 1.** No further action is needed
- Category 2.** Further review and management is needed. There are possible environmental and social benefits, impacts, and/or risks associated with the project (or specific project component), but these are predominantly indirect or very long-term and so extremely difficult or impossible to directly identify and assess.
- Category 3.** Further review and management is needed, and it is possible to identify these with a reasonable degree of certainty. If Category 3, select one or more of the following sub-categories:
- Category 3a:** Impacts and risks are limited in scale and can be identified with a reasonable degree of certainty and can often be handled through application of standard best practice, but require some minimal or targeted further review and assessment to identify and evaluate whether there is a need for a full environmental and social assessment (in which case the project would move to Category 3b).
- Category 3b:** Impacts and risks may well be significant, and so full environmental and social assessment is required. In these cases, a scoping exercise will need to be conducted to identify the level and approach of assessment that is most appropriate.

B. Environmental and Social Issues (for projects requiring further environmental and social review and management)

In this section, you should list the key potential environmental and social issues raised by this project. This might include both environmental and social opportunities that could be seized on to strengthen the project, as well as risks that need to be managed. You should use the answers you provided in Table 4.1 as the basis for this summary, as well as any further review and management that is conducted.

The project would imply the reduction of the risk for the environment and general population by removing and destroying sources of POPs (obsolete pesticides and PCBs). For this project two issues that give rise to limited scale of social and environmental impacts and risk are identified.

The first issue relates to the release of POPs in the environment (2.4). Under Outcome 3.2 the project envisages the destruction of up to 1,200 tons of pesticidal POPs and 300 tons of PCBs. This will obviously represent a large Global Environmental Benefit and Local Environmental Benefit. However, in case of technology failure, there may be the risk of POPs release in the environment. This risk will be minimized through a rigorous selection and testing, before starting with full scale operations, of the required technologies, as described in more detail in the project document, section II Strategy, subsection "Compliance with BAT/BEP criteria". The project will ensure a continuous and sustainable training of all the operators dealing with hazardous waste and hazardous substance to ensure that even after project closure, the occupational risk associated to exposure of POPs is substantially reduced.

The second issue relates to the health and safety (7.3). The project has great potential to improve health of the people by reducing negative impacts in terms of climate change and environment. Decreased occupational risk for workers operating in the electric sector at transformer reclamation sites, by improving workplace safety is also expected, under the above mentioned Outcome 3.2. However there will be still the need to check, by appropriate and periodical medical testing, the health of the worker which will handle the POPs waste during packaging, transportation and disposal operation to ensure that no increased exposure to POPs was caused by project activities.

C. Next Steps (for projects requiring further environmental and social review and management):

In this section, you should summarize actions that will be taken to deal with the above-listed issues. If your project has Category 2 or 3 components, then appropriate next steps will likely involve further environmental and social review and management, and the outcomes of this work should also be summarized here. Relevant guidance should be obtained from Section 7 for Category 2, and Section 8 for Category 3.

The project, under Outcome 3.1, envisages activities related to the inventory, upgrading of storage facilities, sampling and testing of electrical equipment. In the course of all these activities workers may get exposed to harmful substances (pesticides and POPs).

For instance, activities leading to Output 3.1.3 requires the sampling of electric oil from transformers: proper procedures will be developed to prevent oil spillage during sampling, contact of operators with contaminated oil, electric shock due to unsafe operation on powered equipment.

During the upgrading of storage facilities (Output 3.1.4) to prevent the release of POPs in the environment and the exposure of workers, measures will be adopted to prevent improper management of waste, contact of operators with contaminated waste, debris, oil.

Therefore, although activities under Outcome 3.1 are intended to reduce local and global risk for human health and the environment, workers that will carry out these activities may face a temporary increase in their exposure to POPs.

For this reason, the project envisage to carry out in depth training and awareness raising for workers on the potential risk brought by POPs, and on the use of Personal Protective Equipment (PPE) to be used during all the activities which may pose an additional risk. In addition, an Emergency Preparedness Plan, together with the procurement and installation of all the relevant equipment, will be adopted to ensure that the consequences of any accident that may occur during the sampling, packaging, transportation and storage of POPs.

All the operators working in contact with POPs will therefore receive PPE with the relative training for their use. Before, during and after the overall duration of the project, operators working in contact with POPs will undergo a medical examination every 6 months to check their health status and the level of contaminants in blood.

As indicated above, these countermeasure are duly established in the project, thus will mitigate the limited environmental risk from the project activities.

D. Sign Off

Project Manager

M.Usman Manzoor

Date

PAC

Tracy Vienings, DCD-P

Date

Programme Manager

Tracy Vienings, DCD-P

Date

Annex E. GEF POPs tracking tool (attached separately at submission time in Excel)