

GEF-8 PROJECT IDENTIFICATION FORM (PIF)

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General Project Information

Project Title

Sound management of polychlorobiphenyls in Cote d'Ivoire, phase II - objective 2028 of the Stockholm Convention

Region

Cote d'Ivoire

GEF Project ID

11420

Country(ies)

Cote d'Ivoire

Type of Project

FSP

GEF Agency(ies):

UNIDO

GEF Agency ID

230231

Executing Partner

Ministry of Environment, Sustainable Development and Ecological Transition

Executing Partner Type

Government

GEF Focal Area (s)

Chemicals and Waste

Submission Date

10/18/2023

Project Sector (CCM Only)

Taxonomy

Chemicals and Waste, Focal Areas, Sound Management of chemicals and waste, Persistent Organic Pollutants, Polychlorinated Biphenyls, Waste Management, Hazardous Waste Management, Best Available Technology / Best Environmental Practices, Disposal, Convene multi-stakeholder alliances, Influencing models, Strengthen institutional capacity and decision-making, Transform policy and regulatory environments, Communications, Stakeholders, Behavior change, Public Campaigns, Awareness Raising, Beneficiaries, Type of Engagement, Partnership, Consultation, Participation, Information Dissemination, Private Sector, Large corporations, SMEs, Trade Unions and Workers Unions, Civil Society, Non-Governmental Organization, Gender results areas, Gender Equality, Capacity Development, Gender Mainstreaming, Gender-sensitive indicators, Sex-disaggregated indicators, Women groups, Capacity, Knowledge and Research, Knowledge Generation, Learning, Adaptive management, Theory of change, Knowledge Exchange, Field Visit

Type of Trust Fund

GET

Project Duration (Months)

60

GEF Project Grant: (a)

4,150,000.00

GEF Project Non-Grant: (b)

0.00

Agency Fee(s) Grant: (c)

394,250.00

Agency Fee(s) Non-Grant (d)

0.00

Total GEF Financing: (a+b+c+d)

4,544,250.00

Total Co-financing

25,000,000.00

PPG Amount: (e)

PPG Agency Fee(s): (f)

150,000.00	14,250.00
PPG total amount: (e+f)	Total GEF Resources: (a+b+c+d+e+f)
164,250.00	4,708,500.00
Project Tags	
CBIT: No NGI: No SGP: No Innovation: No	

Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? (iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B “project description”. (max. 250 words, approximately 1/2 page)

PCBs are listed in Annex A to the Stockholm Convention. The production and new use of PCBs are banned. Further, Parties must eliminate the use of PCBs in equipment by 2025 and ensure the Environmentally Sound Management (ESM) of liquids containing PCBs and equipment contaminated with PCBs by 2028.

In Côte d'Ivoire there are approximately 1,000 tons of PCBs to be eliminated. Improper handling of transformers with PCBs represents a serious risk due to the possibility of the release of PCBs into the environment. Although PCBs were only used in transformers until 1990, the practice of retro-filling can cause cross contamination. In addition, the unregulated recycling of transformers contributes to increased releases of PCBs into the environment.

The objective of this project is to protect human health and the environment through ESM and final disposal of PCB-containing equipment. Four interlinked pathways have been chosen as pillars: (1) regulatory and institutional framework; (2) PCB inventories; (3) ESM and final disposal of PCB-contaminated equipment; and (4) capacity building and awareness-raising.

Through the planned interventions it is expected that: (1) the regulatory and institutional framework for ESM of PCBs will be completed and established; (2) the inventory of transformers will be updated; (3) mechanisms for ESM and disposal of PCB-contaminated equipment will be developed and implemented; and (4) technical capacities and awareness will be increased. Based on this, a scenario in which the ESM of the transformers has been successfully implemented, the risk of exposure to PCBs is negligible and the releases of PCBs into the environment are insignificant, will be possible.

The project will ensure that 1000 tons of PCB-contaminated equipment and waste will be managed in an Environmentally Sound Manner

Indicative Project Overview

Project Objective

To protect human health and the environment through environmentally sound management and final disposal of PCB-containing equipment in Côte d'Ivoire.

Project Components

1. Regulatory and institutional framework

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
400,000.00	2,400,000.00

Outcome:

1.1. Regulatory and institutional framework for environmentally sound management of PCBs is completed and effectively established.

Output:

1.1.1. A committee of national experts on the new regulatory framework for PCBs, including the objectives and guidelines of the Stockholm Convention for the environmentally sound management of PCBs, is created.

1.1.2 The import control system (including supply) for transformers, capacitors and dielectric oil established and applied by customs authorities is in place.

1.1.3. The new decree on the sound management of PCBs is completed, approved, entered into force and disseminated.

2. PCB Inventories

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
500,000.00	3,000,000.00

Outcome:

2.1. Inventory of transformers in public, semi-public and private sectors is updated.

Output:

2.1.1. Analytical and laboratory capacity are strengthened through the upgrading of equipment, staff training and intercalibration studies of private and public sectors.

2.1.2. The second campaign of sampling and analysis of transformer oil from public establishments, particularly in the inland regions, and at the para-public and private level is carried out.

3. Environmentally Sound Management and final disposal of PCB-contaminated equipment

Component Type	Trust Fund
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Investment	GET
GEF Project Financing (\$)	Co-financing (\$)
2,600,000.00	15,660,000.00

Outcome:

3.1. Mechanisms for environmentally sound management and disposal of PCB-contaminated equipment are developed and effectively implemented.

Output:

3.1.1. Transformers and oils with a contamination rate greater than 500 ppm (production, transport, distribution and private sectors) are disposed of.

3.1.2. Transformers with a contamination rate of between 50 and 500 ppm are decontaminated

3.1.3. Koumassi CIE platform is rehabilitated, including capacity building of the test laboratory.

4. Capacity building and awareness raising

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
250,000.00	1,500,000.00

Outcome:

4.1. Increased capacity for and awareness on PCB life cycle and the risks they pose to health and the environment among public and relevant stakeholders.

Output:

4.1.1. National experts and private operators are trained on all aspects of the PCB life cycle.

4.1.2. Capacity building and training of national experts in oil sampling and analysis

4.1.3. A national communication plan on PCB life cycle and related risks to health and the environment is developed and implemented.

M&E

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
200,000.00	1,220,000.00

Outcome:

5.1. Monitoring

5.2. Evaluation

Output:

5.1.1. Monitoring system set and operational (including monitoring of ESMP, Gender Action Plan and Stakeholder Engagement Plan).

5.1.2. Progress reports are delivered and required decisions/actions are taken.

5.2.1. Mid-term review and terminal independent evaluation conducted.

5.2.2. Lessons learned shared with all relevant stakeholders for future application, development and improvement.

Component Balances

Project Components	GEF Project Financing (\$)	Co-financing (\$)
1. Regulatory and institutional framework	400,000.00	2,400,000.00
2. PCB Inventories	500,000.00	3,000,000.00
3. Environmentally Sound Management and final disposal of PCB-contaminated equipment	2,600,000.00	15,660,000.00
4. Capacity building and awareness raising	250,000.00	1,500,000.00
M&E	200,000.00	1,220,000.00
Subtotal	3,950,000.00	23,780,000.00
Project Management Cost	200,000.00	1,220,000.00
Total Project Cost (\$)	4,150,000.00	25,000,000.00

Please provide justification

(On the budget: PMC is 5.06%). Budget for PMC is in line with the recommended GEF policy of 5% of the Project subtotal accommodated to management costs. The amount is above by 0.06% to plan the foreseen costs of local travel, which will be necessary to ensure an effective inventory of PCBs across the country and the sound monitoring of PCB decontamination. An adequate budget for local travel to ensure an effective inventory has proven critical to achieving timely inventory and decontamination. It is also critical to undertake the adequate level of environmental control over the operations. Co-financing will also be allocated

to the inventory, with several teams from the inspectorate contributing to oil sampling. The group of chemicals known as polychlorinated biphenyls (PCBs) is one of the original twelve POPs covered by the Stockholm Convention. Due to their physico-chemical properties, PCBs were manufactured worldwide for use in a wide range of applications, most importantly as insulating fluids in transformers. PCBs can cause serious health effects in humans and animals, including reproductive impairment and immune system dysfunctions. These chemicals are listed in Annex A to the Stockholm Convention. The production and new uses of PCBs are banned, and Parties to the Stockholm Convention must eliminate the use of PCBs in equipment by 2025 and ensure the environmentally sound waste management of liquids containing PCBs and equipment contaminated with PCBs by 2028. In this context, the project 'Sound management of polychlorobiphenyls (PCBs) in Cote d'Ivoire, phase II - objective 2028 of the Stockholm Convention' aims to reduce or even eliminate PCBs in water and soil, in order to preserve the land and water ecosystems of Côte d'Ivoire.

PROJECT OUTLINE

A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

Global environmental significance of PCBs

The group of chemicals known as polychlorinated biphenyls (PCBs) is one of the original twelve POPs covered by the Stockholm Convention. They possess properties including longevity, heat absorbance and form an oily liquid at room temperature that is useful for electrical utilities and in other industrial applications.

PCBs are aromatic hydrocarbon compounds, consisting of two benzene rings linked by a carbon-carbon bond. The hydrogen atoms can be substituted by up to ten chlorine atoms. PCBs exist as viscous liquids or resins and may be colourless or yellowish with a strong, characteristic smell. One of the most important characteristics of PCBs is that they have excellent dielectric properties, are resistant to chemical and thermal degradation (they decompose at high temperatures above 1000 °C), are not affected by light and are not flammable.

Due to their physico-chemical properties, PCBs were manufactured worldwide for use in a wide range of applications, **most importantly as insulating fluids in transformers**. PCBs were also used in other types of closed and semi-closed applications, such as capacitors, as well as in so-called 'open applications', such as paints, sealants and carbon paper.

PCBs can cause serious health effects in humans and animals, including reproductive impairment and immune system dysfunctions. The International Agency for Research on Cancer (IARC) classified PCBs as Group 1 "carcinogenic to humans". PCBs have been detected in human milk, and in some cases, observed levels for indicator PCBs were several orders of magnitude higher than the WHO safety level. Once in the environment, PCBs enter the food chain. More than 90% of human exposure to PCBs is through food.

Since PCBs are stable to heat and biodegradation, once released into the environment they are persistent and accumulate in the organic components of soils, sediments, biological tissues and organic carbons dissolved in aquatic systems, thereby entering the ecological food chain. PCBs especially accumulate in fish and marine mammals, reaching levels that may be many thousands of times higher than in water. The general population may be exposed to PCBs by ingesting contaminated food and by inhaling contaminated air. PCBs are transported from soil and sediment to the atmosphere and can easily cycle between air, water and soil and enter the air by evaporation from both soil and water. In air, PCBs can be carried long distances and have been found in snow and seawater in areas far away from where they were released, such as the Arctic¹.

PCBs are listed in Annex A to the Stockholm Convention. The production and new uses of PCBs are banned, and Parties to the Stockholm Convention must eliminate the use of PCBs in equipment by 2025 and ensure the environmentally sound waste management of liquids containing PCBs and equipment contaminated with PCBs by 2028².

System description: Current situation of PCBs in the electrical sector in Cote d'Ivoire

The Republic of Cote d'Ivoire in West Africa is located in the intertropical zone in the North of the Gulf of Guinea. The country is bordered south by the ocean Atlantic over 520 km, east by Ghana over 640 km, north by Burkina Faso over 490 km and Mali over 370 km, and west by Guinea over 610 km and Liberia over 580 km (see map below).

In 2015, the population of Côte d'Ivoire is estimated at 25 million inhabitants with an annual demographic growth rate of 2.6%. The majority of inhabitants lives in the forested south and on the Atlantic coast, and about 50% of the total population lives in urban areas. The city of Abidjan has 4,707,000 inhabitants, or 20% of the Ivorian population. 57% of the population lives in rural areas, urban areas in turn host 43%. The rate of urban population growth is estimated at 4.2% between 1988 and 1998. In 2010, the rate of annual population growth is 2.403%.

The industrial capacity of Côte d'Ivoire is one of the densest and most sophisticated of the region. In view of accelerating industrialization, the national development plans of 2016-2020 and 2021-2025 identified the growth of the manufacturing sector as one of the main development strategies for the upcoming decades, with an expected steep increase in complex value chains and related industries. The objective of the 2020 industrial policy is for the industry to reach 28% to 32% of the country's GDP.

As part of the vast development programs in the field of energy started by Côte d'Ivoire in the 2000s, electricity consumption has almost increased by 1.5 and reached 3,703.5 GWh in 2008 compared to 2,863 GWh in 2001 (DCPE, 2009). During the 2000-2008 period there was a clear increase in consumption of electricity with an average annual growth rate of 3.1% in the total production of electrical energy in 2008, estimated at 5,800 GWh, of which 32.72% was of hydraulic origin and 65.08% of thermal origin (World Bank, 2010).

The transport of electricity is done through infrastructures using transformers containing liquids that regulate the thermostat in the device. Liquids put in the devices built before 1990 used polychlorinated biphenyls (PCB). Maintenance work and prolonged use of this equipment sometimes causes leakage of this toxic product into the human and natural environment.

As part of the elimination of these POPs by 2028, Côte d'Ivoire joined a regional project led by the Regional Centre for the Stockholm and Basel Conventions of Francophone Africa (CRCBS-AF), based in Dakar, Senegal, from 2011 to 2016. A detailed inventory was conducted in the context of this project.

The PCB inventory, developed within the framework of the aforementioned regional project, revealed that more than 40% of the transformers (TFOS) of the 14 regional project countries could be found in Côte d'Ivoire. Specifically, more than 11,239 TFOs were declared, i.e. 34 production TFOs, 122 transport TFOs and 11,083 distribution TFOs. Taking into account TFOs built before 1990, the year in which production of these persistent organic pollutants ceased, 8,526 distribution TFOs may contain PCBs out of 11,083 distribution TFOs.

Of these 8,526 distribution TFOs, approximately 1,300 TFOS were scheduled to be visited, but only 936 TFOs were successfully sampled. Out of these 936 samples, 778 samples tested positive with an initial screening. All of these samples were subsequently confirmed with GC analysis by Tredi. In total, during this activity, 11% of the total estimated numbers of old transformers was inventoried with testing and analysis. The results of the GC analysis are summarized as follows:

Results from GC analysis on samples with positive results on initial screening:

Category	Quantity	Percentage
<50ppm	451	57.97%
50 ppm < x < 500ppm	291	37.40%
>500ppm	36	4.63%
Total	778	100.00%

Results of analysis showed that 327 equipment contained PCBs above 50ppm, which is a contamination rate of 35% compared with the total number of samples (936).

The updated national plan for the implementation of the Stockholm Convention was presented to the Government, and endorsed by ATTESTATION No. 00229/SGG/CM /01/03/2017, signed on 8 March 2017. These results were communicated to the Stockholm Convention Secretariat for inclusion in the NIPs. It therefore remains for Côte d'Ivoire to sample the oil of the 7,590 suspected TFOs. Based on the 35% GC-confirmed contamination rate from the initial inventory on 936 samples, a similar contamination rate could be expected for the rest of the transformers produced prior to 1990, i.e. 7,590 transformers. This gives us an expected number of 2,675 TFOs to be decontaminated, for which we could expect around 962 metric tons of PCB oil.

- **Legal and institutional framework applicable to PCBs in Cote d'Ivoire**

The table below provides a summary of the main legal and regulatory texts applicable to PCBs in Cote d'Ivoire, as well as an analysis of their current gaps towards achieving sound management of PCBs in Cote d'Ivoire

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Legal text	Current scope related to PCBs	Current gaps
Stockholm Convention on Persistent Organic Pollutants (POPs),	On 20/01/2004, Côte d'Ivoire ratified the Stockholm Convention, which lists among its aims, the elimination of polychlorinated biphenyls (PCBs), banned industrial chemicals, listed in Annex A	Absence of national legal text implementing the Stockholm Convention
Code of Environment	<p>Refers to product management chemicals</p> <p>Regulates classified installations such as factories, depots, workshops that may present dangers for public health and the environment</p> <p>Applies to all forms of pollution as defined in the article 1 of the Code</p> <p>Prohibits spills, discharges of solid bodies or liquid substances in waterways and bodies of their surroundings</p>	The Code of Environment was amended in 2022 and now explicitly mentions POPs as a hazardous waste. However, specific associated decrees should give a precise orientation of the management of chemicals and more particularly POPs
Decree No. 159 / MINAGRI of 21 June 2004	Prohibits the use in agriculture of active substances in the production of phyto-pharmaceuticals products, prohibits the manufacture, packaging, importation of certain substances listed in Annex A to the Stockholm Convention (Aldrine, Chlordane, Dieldrine, Endrin, Heptaclor, Mirex, Polybrominated Biphenyls (PBB), Polychlorinated Biphenyls (PCB)).	The decree lacks specific guidelines for the effective management of chemicals and hazardous substances.
Decree No. 97-678 of December 3, 1997 on the protection of the marine and lagoon environment against pollution listed under article 17	Bans to discharging toxic products, toxic objects or to defecate into the sea or the lagoon as well as in the coastal zones.	Since POPs are toxic products, they fall under the provision of this article. However, practical arrangements for the disposal of chemicals waste are missing in the existing regulatory framework and should be incorporated.
Law n ° 88-651 of 07 July 1988 on the protection of public health and the environment against the effects of industrial and toxic waste	Prohibited on the whole territory any act relating to the purchase, the sale to import in transit to transport to the depot and storage of toxic industrial waste	<p>There is a lack of specific guidelines for the effective management of chemicals and hazardous substances.</p> <p>No specific ban is enforced on the transport of PCBs within Cote d'Ivoire.</p>
Decree on the ecological management of	Adopted on April 29, 2017	The text established important conditions related to management of PCB but does not establish the following elements related to their final elimination: no

polychlorinated biphenyls (PCBs) No. 00229/SGG/CM of the PNM revised version 2016.		mention of contamination threshold for PCB oils (20, 40 or 50 ppm undetermined), no obligation related to monitoring of PCBs, maintenance and control by the authorities,
Decree No. 2012-147 of 24 October 2012 on polluter pays principle	The decree established the principle of the polluter pays principle as defined by Law No. 96-766 of 03 October 1996 on the Environment Code	This decree established the principle of EPR but does not establish a specific EPR system for PCBs. Specific texts requiring the effective decontamination of TFOs by owners of the equipment, including their responsibility of the associated costs, is still missing in Cote d'Ivoire
Draft decree on the implementation of the Basel Convention on transboundary movement of hazardous waste	Implements in national law the provisions of the Basel Convention, including classification of hazardous waste prohibited for transboundary movement	The Draft decree was developed but it is still not enforced

The table below provides a summary of the institutions in charge of environmental topics related to POPs and PCB

Institution	Current mandate
The Basel Convention Regional Center for French Speaking African Countries (CRCB Francophone Africa)	One of four regional centers on the African continent. It aims to become a Reference Center for the Environmentally Sound Management of chemicals, hazardous waste and other waste for African countries.
The Economic Community of West African States (ECOWAS)	Guides the countries of the region in the environmentally sound management of chemicals and in particular POPs. Example, regulation n ° 04/2009 / cm / UEMOA harmonized rules governing the registration, marketing and control of pesticides within ECOWAS
Ministry in charge of the Environment	Responsible for the design and implementation of the government's environmental policy

Ministry of Health	Regulates and controls drugs and pharmaceutical services and manages a laboratory called the National Public Health Laboratory (LNSP)
National Public Health Laboratory (LNSP)	According to Decree No. 91 654 of October 9, 1991, the LNSP, Public Establishment in Administrative character (EPA) is the benchmark laboratory for analytical, physico-chemical and biological expertise for the Ministry of Health.
Ministry in charge of Industry	Researches and supports opportunities related to industrial production in order to respond to trends in national and international demand. As such, it instructs the design and implementation of new industrial development, national and international promotion of industrial potential of Côte d'Ivoire, the promotion of transformation into finished or semi-finished products of raw materials and the modernization of the wood industry and promotion of agro-industry.

The institutional framework for the management of chemicals in general and POP in particular is characterized by the multiplicity of stakeholders and by its frequent restructuring. All departments deal with chemicals, causing, to varying degrees, overlap and conflicts of jurisdiction and confusion in relation to mandates and responsibilities. In addition, institutional instability diminishes the effectiveness of actions and prevents effective monitoring of programs.

Associated baseline projects

The recommendations of the initial NIP assessment have been implemented through projects and/or programs aiming at supporting Cote d'Ivoire in complying with the obligations under the Stockholm Convention. These projects or initiatives included:

- the development of (8) draft laws and decrees relating to the rational management of chemicals following the dumping of toxic waste by the Probo ship koala
- Capacity-building for national stakeholders on the implementation of the Basel, Stockholm and Rotterdam Conventions under a UNEP-led Project. This project also developed a national early warning system for West Africa, to improve monitoring of environmental hazards such as toxic waste dumping.
- An inventory of PCB equipment between 2012 and 2013, and the implementation of a traceability for use by the national electricity company, and validation of a Contaminated Equipment Disposal Plan.
- The elimination of PCB in 2015: disposal of transformers out of service and contaminated by PCB in March 2015. 1 drum and 2 tanks of 2,000 liters and 3 transformers of 1,300 liters that were

transferred to ENVIPUR. On September 2016 three auxiliary transformers of 1.5 ton from Kossou (production), and 55 ton of contaminated gravel from the Transport de la Riviera station were handed over to ENVIPUR. From March to April 2017, 26 distribution transformers with a PCB concentration greater than 500 ppm of 27,124 ton, 1 PCB oil filter machine of 0.6 ton and 4 drums of contaminated rags of 0.6 ton were handed over to ENVIPUR. **A total of 248,163 ton of oils and carcasses were shipped to TREDI for final elimination.**

To date, accordingly with the inventory from 2012 to 2016 and after the intervention of the elimination of PCBs in 2015 in collaboration with TREDI and other interventions from Côte d'Ivoire Energie services (CI-ENERGIE), there are approximately a total of **1,000** tons of PCBs to be eliminated before 2028. This amount is made up of **118** tons of PCBs accounted for in the mentioned inventory and **882** tons estimated from the 7,226 transformers that remain to be examined.

Key System Drivers

Like many countries, Cote d'Ivoire still faces challenges in ensuring the environmentally sound management of PCBs, including maintenance, handling, transport and interim storage of liquids containing PCBs and equipment contaminated with PCBs.

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The major drivers of the current trends regarding PCB-related issues in the electric sector are:

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- High number of contaminated transformers, most of them still unidentified.
- Improper handling of transformers with PCBs, including their maintenance and storage, represents a high risk due to the possibility of releasing PCBs into the environment as a consequence of spills and eventually fires, such as the fire that occurred in a warehouse in Paraguay in 2015.

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- Although PCBs were only used in transformers until 1990, the practice of retro-filling transformers that had originally been manufactured with PCBs with mineral oil is widespread, with the result that the newly introduced oil may become contaminated with PCBs.
- Unregulated recycling of contaminated transformers and use of the metallic parts contributes to increases in the release and dissemination of PCBs in the environment.

Plausible future

Based on collected experiences and lessons learned from experts, countries and companies around the world, existing guidelines on inventories and handling of PCBs, as well as relevant regulations, various guidelines on environmentally sound management of PCBs have been developed at the international level, such as “PCB Management Guidance - Maintenance, Handling, Transport and Interim Storage of Liquids Containing PCB and Equipment Contaminated with PCB” produced by the PCB Elimination Network (PEN).

Significant changes can be achieved in the current situation in Côte d'Ivoire. It would be necessary to generate a favorable environment at the national level engaging key stakeholders to be able to introduce changes in the current management of the transformers, avoiding the release of PCBs into the environment. Relevant aspects will be to develop and apply an adequate regulatory framework, as well as to promote the necessary incentives so that the owners of the equipment introduce changes that guarantee their environmentally sound management. This implies identifying PCB-contaminated equipment, its replacement and intermediate management to finally proceed with its treatment or final disposal. At the same time, it is necessary to incorporate adjustments in the transformer maintenance protocols that allow the identification of PCB-contaminated equipment and avoid cross contamination. It is also necessary to apply controls in the management of scrap to identify PCB-contaminated equipment and prevent them from entering common recycling circuits.

Key stakeholders

The table below provides a summary of key stakeholders involved in the system. For a detailed analysis of the institutional stakeholders, please refer to the table above in the baseline section related to legal and institutional framework for PCB management:

Actor	Role in the system
Ministry of Environment, Sustainable Development and Energy Transition	Responsible for the protection of human health and environment and the development of national environmental policy.
Ministry of Mines, fuel and energy	In charge of implementing and monitoring Government policy related to the fuel and mining sector as well as energy
The Cote d'Ivoire Electricity Company (CIE)	Private company responsible for the operation of facilities for production, transport and distribution
CI-ENERGIES	<ul style="list-style-type: none"> • Construction and operation of new electricity production plants belonging to the State; • Monitoring the management of the operation of the conceded service • Ensure the financial balance of the electricity sector
Private companies owning TFOs	Users of large transmission and distribution transformers (sugar production, energy and mining sectors)
Private companies specialized in maintenance and recycling of scrap	In charge of maintenance of transformers and decommissioning of transformers including recycling of valuable materials
Private companies specialized in hazardous waste management: Envipur, RMG	Responsible for implementation of ESM of hazardous waste including transformers
Specialized laboratories and academia	Mandated for PCB screening and analytical activities.

General public	In charge of public demand for elimination of hazardous waste with potential harmful effects on health and the environment
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Project objective and barriers

The project 'Sound management of polychlorobiphenyls (PCBs) in Cote d'Ivoire, phase II - objective 2028 of the Stockholm Convention' aims to reduce or even eliminate PCBs in water and soil, in order to preserve the land and water ecosystems of Côte d'Ivoire.

The **objective** of the project is:

To protect human health and the environment through environmentally sound management and final disposal of PCB-containing equipment in Côte d'Ivoire.

Although, as stated in the National Implementation Plan of the Stockholm Convention, the country has identified the issue of PCBs as one of their priority environmental problems, Côte d'Ivoire faces several challenges concerning the environmentally sound management of PCB oils and PCB-containing equipment. There are **barriers** that must be overcome in order to change the aforementioned trend and achieve the project objective.

One of these barriers is weaknesses in the regulatory and institutional framework for environmentally sound management of PCBs.

Another barrier is related to the lack of comprehensive inventories of PCB-contaminated transformers, which makes their identification and consequent proper management difficult. In addition to financial resources to develop inventories, capacity building and training of national experts in transformer oil sampling is required, as well as the strengthening of analytical and laboratory capacity.

Even when companies are aware of the risks associated with PCBs, lack of economic resources and incentives to replace equipment and cover the high costs of treatment and final disposal could push them to delay required actions for the sound management of PCB-containing equipment.

And finally, a lack of national technical capacity and awareness of the PCB life cycle and related risks to health and the environment among public and key stakeholders results in poor PCB management practices leading to a negative impact on the environment and human health. It is often the case that ignorance of the effects of PCBs at all levels, from decision makers to the informal sector, leads to poor PCB management practices. Communities that are unaware of the negative consequences of PCBs might still recycle highly contaminated transformers and use the metallic parts. Similarly, decision makers who are not aware of the consequences of improper PCB management might still implement a programme for PCB maintenance that allows cross contamination.

The table below summarizes the main financial and non-financial barriers identified:

Non-financial barriers	Weaknesses in the regulatory and institutional framework for environmentally sound management of PCBs.
	Lack of comprehensive inventories of PCB-contaminated transformers.
	Lack of national technical capacity and awareness of the PCB life cycle and related risks to health and the environment among public and key stakeholders.
Financial barriers	Lack of economic resources and incentives to replace equipment and cover the high costs of treatment and final disposal.

The project will create an enabling environment and provide financial resources to catalyze the implementation of activities aimed at breaking down the aforementioned barriers. In addition to counting on the government's commitment to promote the project and the willingness of key stakeholders to participate actively, during the PPG phase efforts will be made to further consolidate the commitments, including the co-financing of the activities.

Finally, it is important to highlight that, as indicated above, this project is based on previous activities that have been carried out in the country regarding POPs and specifically with regard to the management of PCBs. These activities have been identified as priorities for the country in compliance with the requirements of the Stockholm Convention, as stated in the National Implementation Plan and its subsequent updates. In particular, it is based on the activities to identify transformers contaminated with PCBs and their elimination that have been carried out since 2011 and that have allowed the elimination of 248 tons of contaminated oil and equipment between 2015 and 2017. This experience developed in the country constitutes a valid precedent that allows predicting the viability of this project.

B. PROJECT DESCRIPTION

Project description

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

Theory of change

Based on the need to introduce the abovementioned changes to achieve the environmentally sound management and final disposal of PCB-containing equipment in the electricity sector of Cote d'Ivoire and thus minimize the risks to health and the environment, four pathways have been chosen as pillars of the project to achieve the stated objective.

The four interlinked pathways, to be developed in parallel, address the specific barriers identified to achieve the project objective and define the project components, as listed below, which comprise sets of project activities and outputs that will deliver immediate project impacts (outcomes).

Component 1. Regulatory and institutional framework

Component 2. PCBs Inventories

Component 3. Environmentally Sound Management and final disposal of PCB-contaminated equipment.

Component 4. Capacity Building and Awareness-Raising.

In addition to specific **assumptions** and **drivers** for each pathway, the **theory of change** is based on the following foundational assumptions: i) there are no delays in funds mobilization (GEF and co-finance); 2) funds are well managed; 3) required expertise is secured and on time; and 4) there is continued political support and stability in the country.

The combination of the immediate project impacts (outcomes) is expected to lead to an intermediate state and finally to the ultimate project impact: human health and the environment are protected from PCB contamination.

The immediate project impacts (outcomes) are:

Outcome 1.1. Regulatory and institutional framework for environmentally sound management of PCBs is completed and effectively established.

Outcome 2.1. Inventory of transformers in public, semi-public and private sectors is updated.

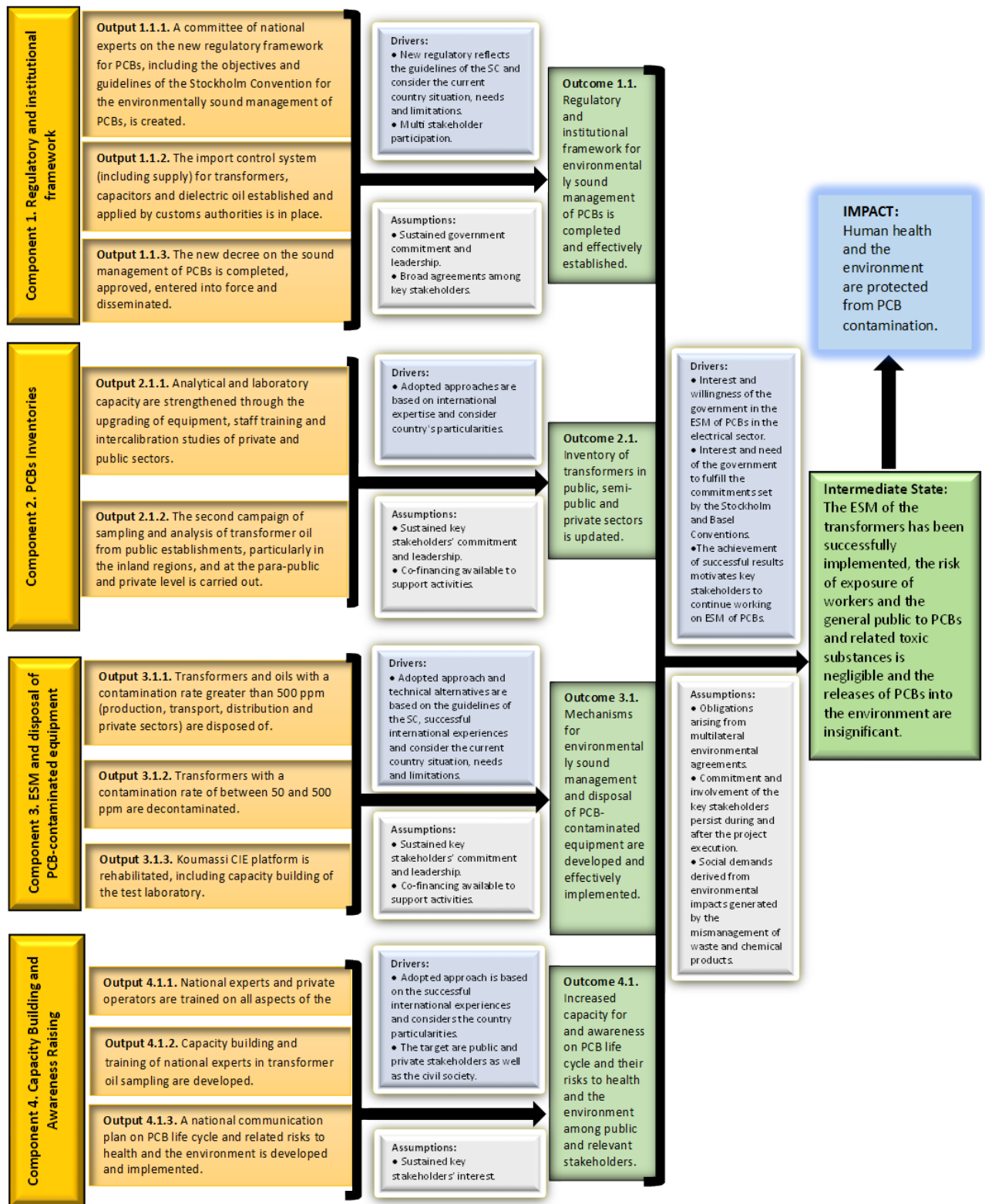
Outcome 3.1. Mechanisms for environmentally sound management and disposal of PCB-contaminated equipment are developed and effectively implemented.

Outcome 4.1. Increased capacity for and awareness on PCB life cycle and related risks to health and the environment among public and relevant stakeholders.

- The expected intermediate state corresponds to the scenario in which the ESM of the transformers has been successfully implemented, the risk of exposure of workers and the general public to PCBs and related toxic substances is negligible and the releases of PCBs into the environment are insignificant.

The following table summarizes the Theory of Change for this project. As indicated, specific assumptions and drivers were identified for each pathway to achieve the respective outcomes. In addition, more assumptions and drivers were identified to achieve the intermediate state and finally the ultimate project impact.

Theory of Change Diagram



Project components and activities

Component 1. Regulatory and institutional framework. The main goal of Component 1 is to complete and effectively establish the regulatory and institutional framework for environmentally sound management of PCBs. The planned activities are:

- Establish a committee of national experts to develop the new regulatory framework for PCBs, including the objectives and guidelines of the Stockholm Convention for the environmentally sound management of PCBs. The Ministry of Environment, Sustainable Development and Energy transition will play a leading role in developing policy and regulations ensuring a conducive environment for monitoring and elimination of PCBs. The representation of women within the committee will be monitored, with approximate gender parity in number and relevance.
- Implement the import control system for transformers, capacitors and dielectric oil established and applied by customs authorities.
- Enforce and disseminate the new decree on the sound management of PCBs.
- Develop decree and associated regulatory mechanism to enforce the obligations of owners of transformers to regularly test their equipment, and to proceed with the elimination of the PCB oil and equipment. The decree should establish a threshold for PCB contamination, which should be 50ppm as per the Stockholm Convention or lower
- Strengthen the decree on sound management of PCBs by enforcing a ban on transport of PCBs in Cote d'Ivoire and precise guidelines on the handling and storage of the waste
- Strengthening the regulatory mechanisms for PCB testing by accrediting laboratories in charge of analysis of oil

Component 2. PCBs Inventories. This component aims to ensure that the inventory of transformers in public, semi-public and private sectors is updated. For this, the projected activities are:

- Strengthen analytical and laboratory capacity through the upgrading of equipment, staff training and intercalibration studies of private and public sectors. National laboratories in Cote d'Ivoire, such as the one of CIAPOL of the laboratory of the Houphouet Boigny University may be selected to benefit from capacity-building in view of ensuring regular and close monitoring of PCBs in transformers. PCB sampling and analysis will be required to further develop the inventory and to confirm PCB concentration levels before and after decontamination.
- Carry out the second campaign of sampling and analysis of transformer oil from public establishments, particularly in the inland regions, and at the para-public and private level. The involvement of the Ivoirian Anti Pollution Center will be critical to ensure the effectiveness of the sampling campaigns. Several teams of inspectorates will be deployed across the country, with the technical support of the Project. National laboratories will also be particularly instrumental to ensuring the development of the inventory.

Gender sensitive recruitment will be practiced to integrate the necessary project technical staff. In addition, gender equality will be taking into account for capacity building and training activities involved.

Component 3. Environmentally Sound Management and final disposal of PCB-contaminated equipment. This component will mainly deal with the management, treatment and final disposal of identified PCB-contaminated transformers, including the following activities:

- **Techno-economic analysis for the treatment and disposal of PCB-containing transformers**
- - SWOT analysis and evaluation matrix taking into account the concentration range of PCBs, their location within the country, their size and characteristics and the national capacities to operate decontamination technologies.
 - Final disposal of transformers and oils with a high contamination rate to be confirmed based on a feasibility study (production, transport, distribution and private sectors).
 - Decontamination of transformers with a low to medium contamination rate.
 - A national platform will be established, including capacity building for phase out of PCBs.
 - During the selection process of an operator for the establishment of an in-country solution for decontamination, actions towards supporting youth and gender representation will be included as part of the technical evaluation criteria.

Appropriate elimination/treatment technology will be further assessed during the PPG taking into consideration, among others, the amounts of PCBs within several concentration ranges (50 to 500 ppm, 500 to 1000 and above 1000 ppm) and the economic viability of the candidate technologies for the amounts within each group.

For treatment of PCB oil with a lower content, cost-effective technologies are those allowing the decontamination of transformers and dielectric oil by chemically destroying PCBs contained therein (chemical dehalogenation). Dehalogenation technologies are a class of consolidated processes commercially available both as large, fixed facilities or relatively small mobile units. Investment in dehalogenation technologies can be envisaged in two sub-categories:

- Stationary treatment unit in the country with a higher and more effective processing capacity,

- Mobile treatment unit with cost-effective solutions made available to large PCB-contaminating transformers that are relatively inaccessible.

Dehalogenation technology has been proven and tested in practice. Available information regarding the investment costs confirms the cost-effectiveness of such solutions for transformers with low to medium concentration of PCBs. In addition, the availability of a site (Envipur) already authorized for hazardous waste management and PCB decontamination is a solid baseline for local decontamination. A mobile unit for chemical dehalogenation would be particularly relevant, because it would enable the treatment of very large power transformers potentially contaminated with PCBs. In stakeholder consultation, the company CIE confirmed that at least 30 transformers could fall within this category. However, considering the very high amount of potentially contaminated TFOs in the country, a stationary unit with a higher processing capacity could also be envisaged. When dehalogenation is combined with cleaning of the carcasses by flushing and circulating hot oil in the transformers, the leaching back effect is demonstrated to be 3% from the initial concentration. Therefore, dehalogenation technology is proven to safely decontaminate PCBs up to 1000ppm, with a reasonable amount of cycles and minimum waste.

Highly contaminated transformers would be dismantled at a qualified hazardous waste HTI plants and the PCB oil destroyed by means of thermal processes (incineration or co-incineration). For this type of waste the most suitable option is exporting either transformers in whole piece or of the PCB oil and impregnated porous material contained therein. A site accredited for hazardous waste management and storage (Envipur) is already available in Cote d'Ivoire, with previous experience in PCB exports in collaboration with company Tredi. Consultations will be conducted during the PPG to confirm the technical approach for refilling and export of highly contaminated TFOs.

Based on the above consideration, and on the updated figures for the inventory, the proper PCB disposal options will be identified. The activities include the development of the Terms of Reference to select the PCB disposal technologies through the UNIDO's international bidding to conclude the technical and commercial evaluation following the UNIDO's procurement rules and regulations.

Component 4. Capacity Building and Awareness-Raising.

The main goal of Component 4 is to ensure future sustainability by increasing capacity for and awareness on the PCB life cycle and related risks to health and the environment among public and relevant stakeholders. The planned activities are:

- Training national experts on all aspects of the PCB life cycle, including: a) PCB assessment; b) analytical aspects; (c) development of action plans; (d) technical aspects management and disposal of PCB-contaminated equipment; e) administrative procedures for PCB management (including routine transformer management and maintenance at utility level); (f) identification, assessment and management of contaminated sites; and g) disposal of PCB- contaminated equipment.
 - Training will ensure a minimum representation of 30% of women with a target of gender parity in all training activities. Guidelines produced by the Project, as well as training content and manuals will include a section focusing on women-associated risks of PCBs. Training specialized in occupational risks will advocate for the equal representation of women at the workplace, as well as the provision of health services specialized in women support.
 - Development and implementation of a national communication plan on the PCB life cycle and related risks to health and the environment, also considering of gender and childhood aspects. Awareness-raising activities will be conducted in collaboration with local NGOs with established connections with local communities. NGOs with proven track-record experience working with women groups will also be engaged into the Project to conduct awareness-raising activities for women groups, focusing on health and occupational risks.

In addition, there is a non-specific component **Component 5. Project Monitoring and Evaluation**. This is the monitoring and evaluation component of the project to ensure progress monitoring and results-based management of all outputs, and to carry out the Mid-term review and Terminal Evaluation of the project. The monitoring and evaluation component includes the following activities:

- - Set up and put in operation the monitoring system. Monitoring system includes the following activities: i) measurement of GEF core indicators; ii) monitoring of project impact indicators (as per Log Frame); iii) monitoring of ESMP, iv) monitoring of Gender Action Plan, v) monitoring of Stakeholder Engagement Plan and vi) periodic Progress Reports.
 - Conduct the Mid-term review and Terminal Independent Evaluation, according to the guidelines established by UNIDO and the GEF.
 - As part of the project closure activities, at least one lessons learned workshop will be held and a **terminal project workshop** will be conducted in the last month of the project.
 - A **final report** will be prepared, including project achievements, further actions needed if applicable, project sustainability, replicability and up-scaling options.

Stakeholders' roles and responsibilities

Management of PCBs include a number of sectors and actors. Key stakeholders identified in the public sector, such as the Ministry of Environment and Sustainable Development, the Ministry of Mines, Petroleum and Energy, the Ministry of Health and Public Hygiene and CI-ENERGIES (management of electrical energy supply and demand) will be encouraged to actively participate in the project. These entities will participate, provide inputs and be consulted during project design.

The Ministry of Environment and Sustainable Development, Directorate General for the Environment, as the government Focal Point and Lead Executing Entity, will execute the project with the assistance of skilled national partners.

The Cote d'Ivoire Electricity Company (CIE), as the private concessionaire company responsible for the operation of facilities for production, transport and distribution, will play a major role in the project.

The private companies that use large transmission and distribution transformers will also play a relevant role in the project. These companies can be grouped by sector: Sugar production (SUCRIVOIRE and SUCAF), Energy (AZITO and AGGREKO) and Mining (ALLIED-GOLD Corporation, ENDEAVOUR, BARRICK-GOLD and MANCHA).

As PCB owners, CIE and the other private companies will be encouraged to work jointly with the government and other stakeholders in the project and participate in project decision making processes through the institutional arrangement to be defined for project implementation.

Private transformers maintenance (IR3T) and the recycling sector will play a relevant role in the project, since they will be responsible for part of the implementation of ESM of transformers.

ENVIPUR a private company dedicated to hazardous waste management, will also be invited to join the project, since they could support activities like transport, conditioning and treatment of transformers and oils.

The Ivorian Anti-Pollution Center (CIAPOL) will play a role in the identification of contaminated oil and equipment. They can carry out tests and analyses.

Specialized laboratories and academia (Universite Felix Houphouet Boigny) will be involved in PCB screening and analytical activities.

Civil Society Organizations (CSOs), academia and private companies specializing in environmental matters will also be consulted on the decisions to be taken in the project and will be informed and consulted on project progress.

The Ministry of Health and Public Hygiene will provide basic information to be used for the awareness-raising strategy.

The following table summarizes the roles and responsibilities of the project key stakeholders. **For more detailed information, please refer to the table in the stakeholder engagement section**

Stakeholder	Responsibility	Role in this project
Ministry of Environment and Sustainable Development, General Directorate for the Environment	<ul style="list-style-type: none"> · National policy development · Protection of human health and environment · Coordinate all matters related to environmental management. 	<ul style="list-style-type: none"> · Government Focal Point · Lead Executing Agency
Ministry of Mines, fuel and energy	<ul style="list-style-type: none"> · Government policy related to the fuel and mining sector as well as energy 	<ul style="list-style-type: none"> · Facilitates inventory · Provides guidance on PCB management · PSC member
Customs	<ul style="list-style-type: none"> · Ensures no import of PCBs 	<ul style="list-style-type: none"> · Contributes to strengthening regulatory framework · Enforces bans on PCB imports
Cote d'Ivoire Electricity Company (CIE)	<ul style="list-style-type: none"> · Investment and maintenance in production, transport and distribution of electricity. · Workers and environmental protection. · Mitigation of environmental risks. 	<ul style="list-style-type: none"> · CIE is the main electricity stakeholders and thus main partner for the PCB inventory, ESM and final disposal strategy.
CI-ENERGIES	<ul style="list-style-type: none"> · Construction and operation of new electricity production plants belonging to the State; · Monitoring the management of the operation of the conceded service · Ensure the financial balance of the electricity sector 	<ul style="list-style-type: none"> · Support PCB inventory · Provide information required to the inventory and elimination or decontamination of transformers · Support collection of transformers for PCB decontamination and elimination · Invest in TFOs replacement
Private companies that use large transmission and distribution transformers: <ul style="list-style-type: none"> · Sugar production (SUCRIVOIRE and SUCAF) · Energy (AZITO and AGGREKO) · Mining (ALLIED-GOLD Corporation, ENDEAVOUR, BARRICK-GOLD and MANCHA). 	<ul style="list-style-type: none"> · Production of sugar, energy and gold. 	<ul style="list-style-type: none"> · As PCB owners, they are key partners for the PCB inventory, ESM and final disposal strategy.
Laboratories/Academia (Universite Felix Houphouet Boigny)	<ul style="list-style-type: none"> · Reinforcing analytics, knowledge and research. · Access to training programme. 	<ul style="list-style-type: none"> · Laboratories will be involved in PCB screening and analytical activities.

	<ul style="list-style-type: none"> · Provide scientific basis and evidence for interventions. 	
Private transformers maintenance (IR3T) and recycling sector	<ul style="list-style-type: none"> · Provide transformer maintenance. · Provide recovery/recycling services for oils and metals. 	<ul style="list-style-type: none"> · They will receive training. · They will implement ESM of transformers.
Private hazardous waste management companies (ENVIPUR)	<ul style="list-style-type: none"> · ESM of hazardous waste. 	<ul style="list-style-type: none"> · Support activities like transport, conditioning and treatment of transformers and oils.
CIAPOL	<ul style="list-style-type: none"> Monitoring pollution levels, Monitoring industry compliance with environmental requirements 	<ul style="list-style-type: none"> · Contribution to the inventory. Screening and analytical activities
CSOs	<ul style="list-style-type: none"> Promoting protection of human health and the environment 	<ul style="list-style-type: none"> · Their action should contribute to the project outreach program and support communication with local communities, youth and women on risks related to PCBs exposure.
International partners (ECOWAS, BRS)	<ul style="list-style-type: none"> Institutions active on hazardous chemicals management and/or environment protection 	<ul style="list-style-type: none"> · Promote technical guidelines and awareness raising content, building knowledge for local stakeholders

The project includes several forms of participation of the above-mentioned stakeholders in the planned activities. The project coordination will actively promote empowerment of women and gender equality in these activities, monitoring gender indicators and introducing necessary corrective measures.

Private sector

This project involves different stakeholders from the private sector, whose participation, commitment and co-financing will be crucial to achieving the desired outcomes. For this reason, during PPG phase, special emphasis will be placed on confirming their commitment and co-financing, promoting their leadership and preparing an effective stakeholder engagement plan.

The Cote d'Ivoire Electricity Company (CIE) will play a major role, so its active participation and leadership will be promoted.

In addition, other private companies that use large transmission and distribution transformers in the sugar production, mining and energy sectors, as well as private transformers maintenance companies, analytical laboratories, recycling and hazardous waste management sector will be motivated to be on board from the PPG stage.

Gender mainstreaming

UNIDO acknowledges that the empowerment of women and gender equality have significant positive impacts on key drivers of poverty alleviation and social progress, such as sustained economic growth and inclusive industrial development. UNIDO's mandate to promote inclusive and sustainable industrial development (ISID) relies on the advancement of gender equality and the empowerment of women.

The project interventions will consider gender mainstreaming activities during all stages of the project from formulation to evaluation following GEF and UNIDO Gender Policies.

One of the guiding principles of the project will be to ensure that both women and men are provided equal opportunities to lead, participate in, and benefit from the project.

As a guiding principle, the project is designed to ensure both women and men are provided equal opportunities to participate and benefit from the project without compromising the technical quality of the project results. In practical terms, this will be demonstrated in a multitude of ways:

- Based on the gender-neutral ToRs, gender sensitive recruitment will be practiced at all levels where possible, especially in the selection of project staff, researchers and experts, as well as technical staff.

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- Gender dimensions will be considered in all decision-making processes. During project activity implementation, effort will be made during stakeholder consultations towards focusing on gender equality and women's empowerment issues.
- Integration of a gender component directly related with the specific topic into training activities and ensuring equal access to training.
- Ensuring representation of women within project committees, with approximate gender parity in number and relevance.

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- As part of the monitoring and evaluation process, ensuring the use and systematically monitoring gender-specific and sex-disaggregated indicators. If the gender goals are not achieved, identifying the barriers and introducing corrective measures.

A social and gender analysis will be conducted during the PPG phase. The PPG phase will further assess the gender context and relevance of the proposed project as a whole in order to ensure the final project design fully considers its implications for women and men.

Additionally, the PPG stage will be used to create relevant tools and methodologies for tracking gender issues throughout the project's implementation. To establish a baseline and develop targets, basic relevant data and qualitative information will be collected during PPG and gender markers will be assigned at the output level in the project design.

Knowledge management

From the beginning, the project is being built on the basis of existing experience gained in similar projects that both UNIDO and other agencies have carried out or are currently carrying out throughout the world. UNIDO has been implementing a number of projects with similar approaches regarding ESM of PCBs and POPs. Lessons learned from UNIDO's previous PCB projects will be incorporated into the project implementation to ensure harmonization of the approaches within the national context.

Information exchange between these initiatives is expected to take place via accumulated knowledge at different national and regional organizations. Likewise, it is expected that the results and lessons learned during this project will be duly disseminated among relevant partners and in appropriate regional and global forums to be used in future projects.

Trainings will be used as knowledge management activity. Specific trainings on PCBs management plans, regulatory framework, risk reduction and PCB transport, storage and elimination, etc. will be provided by national and international experts to share knowledge on how to identify PCBs and how to establish mechanisms to prevent leakage and cross contamination, safe handling and storage of the equipment in the industrial site.

The Stockholm Convention's initiatives, like the PCB Elimination Network (PEN) and participation in collective information events such as Webinars organized by the Basel/Stockholm Conventions Secretariat will also be utilised as knowledge management tools.

At the national level, during project implementation, a web platform for sharing relevant project information will be designed and launched. Public access will be granted to all resources which are of public relevance, such as project performance, guidance on PCB material management, environmental impact assessment documents, etc.

National meetings on lessons learned will be held for each major milestone completed, such as inventory and database development, regulatory framework review, and disposal activities.

Knowledge management activities will be planned and executed considering explicitly gender dimension.

Monitoring and evaluation will facilitate tracking execution progress toward the objectives and outcomes. Likewise, it will facilitate learning, feedback, and knowledge sharing on results and lessons learned among the primary stakeholders to improve knowledge and performance.

Communication and outreach strategy, including specific breakdown budget, will be further developed during PPG phase.

Policy coherence

The project is compliant with the Stockholm Convention on POPs, which has been ratified by Cote d'Ivoire. In addition, is aligned with the country priorities on POPs management established in the original NIP and subsequent updates.

Regarding specific legislation on PCBs, on April 29, 2017 the Council of Government adopted the draft decree on the ecological management of polychlorinated biphenyls (PCBs) No. 00229/SGG/CM of the PNM revised version 2016. Nevertheless, Component 1 of this project aims to establish a regulatory and institutional framework for environmentally sound management of PCBs, including the preparation by a committee of national experts of the new regulatory framework for PCBs.

Innovation and scaling toward broader transformation

The Project will foster innovation by promoting technology transfer and capacity building of the national industry for sound management of PCBs. State of the art and innovative technologies will be thoroughly assessed to deploy the most cost-effective, time effective and the least impactful solution to PCB decontamination in Cote d'Ivoire. The Project will aim to achieve total decontamination of PCBs in Cote d'Ivoire.

In addition to policy coherence, capacity-building and technology transfer, the Project will make use of existing knowledge by connecting the industry to global platforms providing know how on chemicals management. The Project will also capture technical and business solutions piloted under the Project to foster dissemination at a wider regional or global scale.

Laboratories equipped to enforce regular PCB monitoring will gain knowledge in POPs analysis in general, and will support sound chemicals management in the country. The generated expertise at the national level will be applied to improve the management of other hazardous waste. Furthermore, improving installed analytical capacity can contribute to the execution of similar projects.

Global Environmental Benefits

Successful implementation of the project interventions will contribute to the global environmental benefit of reducing risks to human health and the environment from the release and exposure to PCBs.

The project will contribute to creating the necessary legislative framework to advance in the POPs environmentally sound management agenda and strengthen national capacities and awareness to accelerate the adoption of ESM principles.

The project will safely remove 1,000 tons of PCBs from global circulation, preventing the release of PCB-contaminated oil into the environment. The decontamination and final disposal of PCB-contaminated equipment will help the country to meet the mandate of the Stockholm Convention in terms of PCB management, also complying with the mandates of the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal.

The elimination of equipment contaminated with PCBs, together with the implementation of an environmentally sound management of the transformers with regard to maintenance and dismantling and recycling operations, will minimize aspects related to cross-contamination and exposure of workers to PCBs, while minimizing the possibility of PCB releases into the environment.

With regard to the transport of contaminated equipment, the risks of spillage will be minimized. In relation to storage, the risks of spills will also be minimized, as well as the risk of fire, therefore, not only will the release of PCBs into the environment be minimized, but the potential generation of dioxins and furans as a consequence of fires will be avoided.

The generation of contaminated sites as well as the contamination of soil, surface and ground water and air will also be avoided. As such, ecosystems are protected, while biodiversity is preserved. All these aspects will also contribute to significantly reduce the exposure of workers and the general population to PCBs, avoiding effects on human health. In that way, minimization of PCBs releases will ultimately reduce future healthcare costs, human suffering and environmental remediation costs as a result of pollution caused by these toxics.

Beyond the treatment and final disposal of the estimated 1,000 tons, the developed technical capacities could be allowing the adequate identification and management of other equipment that for different reasons have not been identified in this instance or cannot be included due to not having the necessary funds.

As a result of this project, technical capacities will be generated at the national level that can be applied to improve the management of other hazardous waste, since there are several aspects related to handling, transportation, storage, conditioning, labeling, export, and even treatment that have similar approaches. The installed capacity at the national level will also be improved in terms of analytical infrastructure, as well as the development of technical capacities to carry out this type of analysis, which, in addition to continuing to be used as a control tool for transformers, can also be used as a basis for other projects.

Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

As the GEF Agency implementing this project, UNIDO will facilitate cooperation with other initiatives that will contribute to meeting outcomes and building knowledge of key stakeholders. In Cote d'Ivoire, UNIDO is currently implementing the GEF 6 Project 9263 entitled 'sound management of PBDE and uPOPs to achieve reduction of emissions from the industrial sector in Cote d'Ivoire'. Planned activities will build on decrees related to hazardous waste management and on technical guidelines related to hazardous waste management that have been recently developed.

For several years, UNIDO has been implementing and executing a number of GEF projects dedicated to sound management of PCBs (e.g. GEF 9916 in Morocco, 9227 in Georgia, 5646 in Bolivia, 5325 in Congo, 3775 in India, 4782 in Lao PDR, 9357 in Paraguay, 4915 in Russia, 4887 in Serbia etc.). This extensive experience will allow UNIDO to build on successful outcomes and thoroughly assess the best solution to ensure complete elimination of PCBs.

Core Indicators

Indicator 9 Chemicals of global concern and their waste reduced

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
1,000.00	0.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
Polychlorinated biphenyls (PCB)	1,000.00			

Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.3 Hydrochlorofluorocarbons (HCFC) Reduced/Phased out (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.6 POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.7 Highly Hazardous Pesticides eliminated

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.8 Avoided residual plastic waste

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	90			
Male	210			
Total	300		0	0

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

CI 9: (1) In Côte d'Ivoire there are approximately a total of 1,000 tons of PCBs oil to be eliminated before 2028. This estimated amount is based on extrapolation from the inventory from 2016 conducted on 936 transformers. This inventory showed a contamination rate of 35%. The number of distribution TFOs produced prior to 1990 is estimated at 8,526. Assuming that the remaining amount to be inventoried, i.e. 7,590 TFOs shows a similar positive rate, approximately 2,700 TFOs will potentially be contaminated with PCBs.

Supposing that the majority of the distributional transformers are with capacity of 250 KVA and 400 kVA, the average weight per transformer would be 1,300 Kg including 370 Kg of oil. For 2,700 of possibly contaminated TFOs, the overall amount of contaminated oil could therefore reach 999 tonnes of PCB oil. The Project will focus on the establishment of a sustainable in-country decontamination solution that will ensure the successful phase-out of PCBs. For highly contaminated PCBs – above 500 ppm or 1000 ppm depending on the technology adopted – export for final elimination will be envisaged. In total, 1000 tonnes of PCB oil as well as a corresponding quantity of equipment for highly contaminated TFOs will be successfully phased out over the life time of the investment as a result of the project intervention. These estimations will be verified and confirmed during the PPG phase.

CI 11: Minimum number of people directly involved in the project. As part of the Project Monitoring and Evaluation component, for each activity the total number of beneficiaries will be counted, including the proportion of women. This indicator arises from the annual in-year total number of beneficiaries summed to total over the project implementation period.

Reference (6): Preparation of a National Environmentally Sound Management Plan for PCBs and PCB-contaminated equipment, training manual from the Secretariat of the Basel Convention

Risks to Project Preparation and Implementation

Summarize risks that might affect the project preparation and implementation phases and what are the mitigation strategies the project preparation process will undertake to address these (e.g. what alternatives may be considered during project preparation such as in terms of consultations, role and choice of counterparts, delivery mechanisms, locations in country, flexible design elements, etc.). Identify any of the risks listed below that would call in question the viability of the project during its implementation. Please describe any possible mitigation measures needed. (The risks associated with project design and Theory of Change should be described in the "Project description" section above). The risk rating should reflect the overall risk to project outcomes considering the country setting and ambition of the project. The rating scale is: High, Substantial, Moderate, Low.

Risk Categories	Rating	Comments
Climate	Low	<p>Risks: Côte d'Ivoire is located in West Africa along the Gulf of Guinea. Forest covers the southern portion of the country while savannah dominates in the north, and the country boasts 4 large rivers. Ranked 144th out of 169 countries for its ND-GAIN index⁶, Côte d'Ivoire is among the countries most vulnerable to climate change due to its geographical location, its economic structure and its poor preparation to deal with the harmful effects of climatic changes. The coastal plains, home to 30% of the Ivorian population and 80% of the country's economic activities, are already strongly affected by the harmful effects of climate change which accentuates the rise in sea levels and coastal erosion, thus endangering the human lives, especially for people living on the coast. Extreme climate events such as heavy rains and floods could impact project implementation, especially storage of transformers and operations related to decontamination and conditioning for export. Mitigation measures: Extreme climate conditions will be addressed as an important criterion</p>

		<p>for selecting the location and type of facilities required to be used in the storage of transformers and the operations related to decontamination and conditioning for export</p>
<p>Environment and Social</p>	<p>Moderate</p>	<p>Risk: 1) Technical staff participating in the project implementation and having contact with PCB-contaminated equipment will be excessively exposed to PCB harmful influence. 2) Accidents and PCB-contaminated oil spills could cause contamination of the environment and eventually affect the health and safety of the community during transport, storage, handling and packaging operations of the PCB-containing equipment. Mitigation measures: The project will ensure the application of internationally accepted safety standards in all operations where equipment contaminated with PCBs is handled. Specific protocols will be developed or adjusted to local conditions based on relevant international guidelines. The use of such protocols will be ensured throughout the whole duration of the project. In addition, contingency measures and specific training will be developed as part of the ESM system. The required Personal Protective Equipment (PPE) will be defined and its provision and proper use during the field operations will be supervised.</p>
<p>Political and Governance</p>	<p>Moderate</p>	<p>Risks: 1) Political support is insufficient to promote the required regulatory and institutional framework and drive strong engagement from key stakeholders. 2) Changes in government and country personnel could adversely impact project implementation and continuity. Mitigation measures: The</p>

		<p>project will engage with government stakeholders throughout the PPG and implementation phase to ensure that the country’s political buy-in and national priorities are considered. Political buy-in will also be maintained through strategic and periodic awareness-raising and communication to key decision-makers including parliamentarians, and through carefully crafted messages to targeted audiences at the national level. A committee of national experts on the new regulatory framework for PCBs will be created with broad participation from different sectors in order to obtain the widest possible consensus. Continuity plans will be an essential factor in selecting personnel to be involved in project coordination and the training and capacity-building activities</p>
Macro-economic	Low	<p>Risks: The government decides to change its environmental priorities affecting commitment to the project. Mitigation measures: The project will engage with government and key stakeholders throughout the PPG and implementation phase to ensure commitment to the project and availability of co-financing. In addition, the project will start generating awareness on PCB life cycle and their risks to health and the environment among public and relevant stakeholders.</p>
Strategies and Policies	Low	<p>Risks: Specific policies, rules and procedures as well as normal bureaucracy in the involved agencies and institutions could delay project preparation and implementation. Mitigation measures: In the PPG stage a comprehensive understanding of the applicable specific policies,</p>

		<p>rules procedures and expected bureaucracy in the involved agencies and institutions will be achieved. On this basis, a suitable milestone and timeline will be agreed with the country's stakeholders.</p>
<p>Technical design of project or program</p>	<p>Low</p>	<p>Risks: There could be some delays in the expansion of the local analytical capacity as well as some coordination problems for the taking of samples from equipment in operation, which would delay the completion of the inventory and consequently the preparation and execution of the decontamination and final disposal plan for the transformers. Mitigation measures: The identification and engagement of suitable experts for the implementation of the above-mentioned activities, as well as the elaboration of protocols for oil sampling and proper coordination will be key issues to consider from the PPG stage of the project</p>
<p>Institutional capacity for implementation and sustainability</p>	<p>Low</p>	<p>Risks: Project partners do not sustain the project activities including co-financing commitments. Mitigation measures: Project Components and Institutional Arrangement and Coordination were specifically designed to address the sustainability and durability of project outcomes. Further, effective stakeholder engagement from the onset will ensure adequate buy-in.</p>
<p>Fiduciary: Financial Management and Procurement</p>	<p>Low</p>	<p>Risks: 1) Project funds are not adequately managed. 2) delay in the mobilization of co-finance. Mitigation measures: GEF fiduciary guidelines, as well as that of the agency, will be followed in fund management. This will also be part of the frequent monitoring and evaluation activity of the project.</p>

Stakeholder Engagement	Moderate	<p>Risks: 1) Stakeholders are not properly involved and/or there is weak coordination among stakeholders, leading to inadequate project implementation. 2) Lack of interest of the PCB owners to replace, phase-out and dispose of the PCB equipment due to high costs.</p> <p>Mitigation measures: The entry into force of the new regulatory framework will include certain obligations, so it is unlikely that the key stakeholders will not be interested in the project. On the other hand, the project provides important economic support, not only for decontamination/final disposal but also for the development of technical and analytical capabilities, which makes it attractive to different stakeholders. Project design include local decontamination which is cost effective relative to treatment abroad/replacement. Subsidized disposal and treatment of PCB-contaminated equipment and potential recovery of valued metals would help in overcoming PCB owners' reluctance to cooperate with the project. The risk of stakeholder disengagement will be prevented through effective frequent communication with all identified stakeholders and developing and agreeing on a stakeholder engagement plan. Further, the project will ensure that all stakeholders have specific roles to ensure continued involvement.</p>
Other		Not applicable
Financial Risks for NGI projects		Not applicable
Overall Risk Rating	Moderate	The overarching risk to this project is moderate. Close monitoring of the identified risks and effective implementation of mitigation

measures will ensure that the risks do not adversely impact the success and durability of the project.

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

The proposed interventions are directly aligned with Chemicals and Waste focal area and contemplate the following principles included within the GEF priorities in this focal area:

1. *Directly supports implementation of the Stockholm Convention;*
2. *potential to generate multiple global environmental benefits and socioeconomic benefits;*
3. *sustainability of the activities as well as contribute to sustained sound management of chemicals and waste;*
4. *private sector engagement;*
5. *prioritized in National Implementation Plans (NIPs); and*
6. *supports policy coherence across national institutions to manage hazardous chemicals and waste.*

Interventions detailed in the project description section are also aligned with the three objectives adopted by the GEF for the Chemicals and Waste focal area:

Objective 1: *Creation, strengthening and supporting the enabling environment and policy coherence to transform the manufacture, use and sound management of chemicals and to eliminate waste and chemical pollution;*

Objective 2: *Prevention of future buildup of hazardous chemicals and waste in the environment*

Objective 3: *Elimination of hazardous chemicals and waste.*

Interventions included in Project Component 1 (related to the regulatory and institutional framework), Project Component 2 (related to developing PCB inventories), Project Component 3 (related to the environmentally sound management and final disposal of PCB-contaminated equipment) and Project Component 4 (related to increased capacity building and awareness-raising), all together contribute to the achievement of **Objectives 1 and 2.**

In addition, interventions comprised in Project Component 3 (related to the environmentally sound management and final disposal of PCB-contaminated equipment) supported by activities included in Project Component 2 (related to developing PCB inventories) contribute directly to the achievement of **Objective 3.**

On the other hand, at national level, the project is aligned with the PCB strategy stipulated in the National Implementation Plan (the original 2006-NIP and subsequent 2016 update) and specifically aims to enhance the country's compliance with the Stockholm Convention on POPs.

In addition, no contradictory policies have been identified with proposed interventions.

Finally, considering the conceptual design of this project and its management and administration mechanisms, it can be ensured that GEF funds will be used effectively to improve the management of PCBs in Cote d'Ivoire.

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment:

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

Were the following stakeholders consulted during project identification phase:

Indigenous Peoples and Local Communities:

Civil Society Organizations: Yes

Private Sector: Yes

Provide a brief summary and list of names and dates of consultations

Consultations were held during the development of the PIF with key actors of the Government, research, private sector and civil society. Expected role of stakeholders with which consultations were held is summarized in the table below. Preliminary contacts, information exchange, exploration of interest confirmed willingness to participate and co-finance the project. Involvement of CSOs and local communities will be further explored during PPG stage.

Actor type	Name	Current responsibilities	Foreseen role in the project
Government	Ministry of Environment, sustainable development and energy	Development of national policies	Focal point from the Government for validation workshops, steering committee and other bodies as

	transition, General Directorate for the Environment	<ul style="list-style-type: none"> Protection of human health and the environment Coordination of all matters related to the environment 	<p>planned in the governance structure of the Project</p> <ul style="list-style-type: none"> Supporting environmental assessment of operators for local PCB decontamination Main project executing partner Hosting of the project coordination unit Support on development and approval of policy work
Government	Ministry of Mines, fuel and energy	In charge of implementing and monitoring Government policy related to the fuel and mining sector as well as energy	<ul style="list-style-type: none"> Supporting the project coordination unit in communicating with the main electricity distribution companies, especially regarding their collaboration and contribution to the inventory of PCBs Participating in validation workshops and steering committee Providing guidance and support related to management of PCBs
Government	Ivorian Anti-Pollution Center (CIAPOL)	<ul style="list-style-type: none"> In charge of hazardous waste management. monitoring of air, soil and water quality, Supervision of pollution levels and production of pollution reports. Monitoring compliance with environmental requirements by industry 	<ul style="list-style-type: none"> Supports environmental monitoring of PCB decontamination Supports environmental monitoring of export operations related to PCB decontamination Supports the inventory of PCB-contaminated oil by deploying teams of environmental inspectors across the country Supports analysis of contaminated oil by allocating teams of laboratory staff to the project objective
Private sector	CI-ENERGIES	<ul style="list-style-type: none"> Construction and operation of new electricity production plants belonging to the State; Monitoring the management of the operation of the conceded service 	<ul style="list-style-type: none"> Allocate time and personnel to support PCB inventory under the supervision of the project coordination unit and/or CIAPOL Provide information required to the inventory and elimination or decontamination of transformers including year of production, weight,

		<ul style="list-style-type: none"> • Ensure the financial balance of the electricity sector 	<p>tonnes of oil, contamination level when known etc</p> <p>Allocate time and personnel to support collection of transformers for PCB decontamination and elimination</p> <p>Invest in replacement of highly contaminated transformers that should be eliminated</p>
Private sector	Ivoirian company of Electricity (CIE)	<ul style="list-style-type: none"> • Management and operation in the production, transport, and distribution of electricity within the limits its licensing authority. • Protection of workers and the environment. • Environmental risk mitigation. • The CIE has an operating contract with the government of Cote d'Ivoire. All electricity transmission equipment is provided by CI-ENERGIES. The CIE only carries out financial exploitation. • At the request of companies, the CIE provides transformers. At their request for inspection, the CIE sends its experts for the maintenance and inspection of the dielectric oil. • In the event of device failure, a maintenance contract is signed and 	<p>Supports decontamination and replacement of transformers for small private companies</p>

		<p>allows the CIE to make a report</p> <ul style="list-style-type: none"> Is responsible for treatment or removal of its transformers. In the public sector, it sends its report to CI-ENERGIES which is responsible for ensuring compliance. 	
Private sector	Envipur	<ul style="list-style-type: none"> offers global solutions in terms of ec-logistics, environmental management and control, mainly in the industrial sectors, service companies and communities. Operator with a site already accredited for hazardous waste management and PCB storage and management 	<p>Potential operator to host a local decontamination solution for PCBs</p> <p>Potential project partner to support the collection, temporary storage and export of highly contaminated oil and transformers for final elimination</p>
Private sector	IR3T	<ul style="list-style-type: none"> Maintenance of transformers Recycling of metal and oil 	<p>Potential operator to host a local decontamination solution for PCBs</p> <p>Apply training and guidelines on PCB sound management in its maintenance activities</p>
Private sector	SUCRIVOIRE SUCAF	<ul style="list-style-type: none"> Sugar production, owner of transformers 	<p>Support inventory and decontamination of PCBs</p>
Private sector	AZITO AGGREKO	<ul style="list-style-type: none"> Energy production 	<p>Support inventory and decontamination of PCBs</p>
Private sector	ALLIED-GOLD, Corporation NDEAVOUR BARRICK-GOLD MANCHA	<ul style="list-style-type: none"> Gold production, mining sector 	<p>Support inventory and decontamination of PCBs</p>
Laboratory	Laboratory University Felix Houphouet Boigny (LTHAI)	<ul style="list-style-type: none"> Strengthens analysis, knowledge and research. 	<p>Participate in PCB sampling and analysis</p>

CSOs: NGO	CASES	· NGO specialized in health and social support to population	Supports awareness raising activities in local languages (e.g. dioula) as appropriate
CSO	AFECAMCI	· Scrap dealer association	Support dissemination of best practices related to environmental management of PCBs and awareness raising activities on health and environmental consequences of PCBs
CSO:NGO	Foundation Marie-Esther	· Awareness raising for social issues including gender awareness and inclusion of women	Support awareness raising, especially for activities targeted for women and vulnerable groups
CSO	RIABD (network for innovation on organic and sustainable agriculture)	· Training in the field of agri-business	Support awareness activities focusing on the environmental consequences of illegal PCB dumping on sea water as a key target message
CSO: NGO	AIDD: Action of innovation and sustainable development	· Support local action for job creation and improved livelihoods	Support awareness raising activities towards local communities, in local language.

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

ANNEX A: FINANCING TABLES

GEF Financing Table

Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant(\$)	Agency Fee(\$)	Total GEF Financing (\$)
UNIDO	GET	Cote d'Ivoire	Chemicals and Waste	POPs	Grant	4,150,000.00	394,250.00	4,544,250.00
Total GEF Resources (\$)						4,150,000.00	394,250.00	4,544,250.00

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount (\$)

150000

PPG Agency Fee (\$)

14250

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non- Grant	PPG(\$)	Agency Fee(\$)	Total PPG Funding(\$)
UNIDO	GET	Cote d'Ivoire	Chemicals and Waste	POPs	Grant	150,000.00	14,250.00	164,250.00
Total PPG Amount (\$)						150,000.00	14,250.00	164,250.00

Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/	Focal Area	Sources of Funds	Total(\$)
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		Regional/ Global			
Total GEF Resources					0.00

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing(\$)	Co-financing(\$)
CW-3	GET	4,150,000.00	25000000
Total Project Cost		4,150,000.00	25,000,000.00

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Ministry of Environment and Sustainable Development	In-kind	Recurrent expenditures	5050000
Recipient Country Government	Ministry of Environment and Sustainable Development	Grant	Investment mobilized	2000000
Recipient Country Government	Ministry of Health and Public Hygiene	In-kind	Recurrent expenditures	500000
Recipient Country Government	Ministry of Mining, Petroleum and Energy	In-kind	Recurrent expenditures	500000
Recipient Country Government	CI-Energies	In-kind	Recurrent expenditures	500000
Recipient Country Government	CI-Energies	Grant	Investment mobilized	1500000
Private Sector	Cote d'Ivoire Electricity Company (CIE)	In-kind	Recurrent expenditures	2000000
Private Sector	Cote d'Ivoire Electricity Company (CIE)	Grant	Investment mobilized	1400000
Private Sector	CIAPOL	In-kind	Recurrent expenditures	500000
Private Sector	CIAPOL	In-kind	Recurrent expenditures	420000
Private Sector	ENVIPUR	In-kind	Recurrent expenditures	1500000

Private Sector	ENVIPUR	Grant	Investment mobilized	5540000
Private Sector	AGGREKO	In-kind	Recurrent expenditures	1000000
Private Sector	AZITO	In-kind	Recurrent expenditures	2000000
Private Sector	AZITO	Grant	Investment mobilized	50000
Private Sector	IR3T	In-kind	Recurrent expenditures	500000
GEF Agency	UNIDO	Grant	Investment mobilized	40000
Total Co-financing				25,000,000.00

Describe how any "Investment Mobilized" was identified

Investment mobilized identified as a result of detailed analysis of the private sector involved in hazardous waste management or transformation maintenance. Amount evaluated as a result of experience from country stakeholders, UNIDO and private partners in activities related to PCB decontamination

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Ganna Onysko	10/12/2023		+43 1 26026 3647	g.onysko@unido.org
Project Coordinator	Lamia Benabbas	10/12/2023		+43 1 26026 3026	L.Benabbas@unido.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Name	Position	Ministry	Date (MM/DD/YYYY)
Gustave Bedi	POPs Focal Point		9/9/2023
Alimata Kone	Permanent Secretary	Ministry of Economy and Finance	11/20/2023

ANNEX C: PROJECT LOCATION

Please provide geo-referenced information and map where the project interventions will take place



The project will be implemented in Cote d'Ivoire, mainly involving the cities listed below indicating the respective coordinates.

Cities	Coordinates
	5°20'11"N 4°01'36"O

Abidjan	
Yamoussoukro	6°48'58"N 5°16'27"O
Bouake	7°41'00"N 5°01'59"O
Korhogo	9°27'28"N 5°37'46"O
Daloa	6°52'00"N 6°27'00"O
Man	7°24'45"N 7°33'13"O
San Pedro	4°44'00"N 6°38'00"O
Kossou	7°00'23"N 5°28'52"O
Buyo	6°14'45"N 7°00'24"O
Odienne	9°30'00"N 7°34'00"O
Abengourou	6°43'47"N 3°29'47"O

ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title

Environmental and Social Screening

Last PCB inventory Cote Ivoire

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
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No Contribution 0

No Contribution 0

Significant Objective 1

No Contribution 0

ANNEX F: TAXONOMY WORKSHEET

Level 1	Level 2	Level 3	Level 4
Influencing Models	<p>Transform policy and regulatory environments</p> <p>Strengthen institutional capacity and decision-making</p> <p>Convene multi-stakeholder alliances</p>		
Stakeholders	Private Sector	<p>SMEs</p> <p>Large corporations</p>	
	Beneficiaries		
	Civil Society	<p>NGOs</p> <p>Trade and Workers Unions</p>	
	Type of Engagement	<p>Information Dissemination</p> <p>Partnership</p> <p>Consultation</p> <p>Participation</p>	
	Communications	<p>Awareness Raising</p> <p>Public Campaigns</p> <p>Behavior Change</p>	
Capacity, Knowledge and Research	Capacity Development		
	Knowledge Generation		
	Knowledge Exchange	Field Visit	
	Learning	<p>Theory of Change</p> <p>Adaptive Management</p>	

	Knowledge and Learning	Knowledge Management Capacity Development Learning	
	Stakeholder Engagement Plan		
Gender Equality	Gender Mainstreaming	Beneficiaries Women groups Sex-disaggregated indicators Gender-sensitive indicators	
	Gender results areas	Capacity development Awareness raising	
Focal Area/Theme	Chemicals and Waste	Persistent Organic Pollutants Sound Management of chemicals and Waste Waste Management Disposal BAT/BEP	Polychlorinated Biphenyls Hazardous Waste Management