



**UNITED NATIONS DEVELOPMENT PROGRAMME  
PROJECT DOCUMENT<sup>1</sup>**

<b>Project Title:</b> Management and Disposal of PCBs in Rwanda
<b>UNDAF Outcome(s):</b> UNDAF 2008-2012 -- RWANDA <sup>2</sup> Management of Environment and Natural Resources and land improved in Sustainable way
<b>UNDP Strategic Plan:</b> Good practices at central and local levels for the management of waste and contaminants developed and scaled up
<b>UNDP Strategic Plan Outcome:</b> Effective environment management frame work (Institutional policy frameworks for sustainable natural resources management and ecosystem conservation developed and implemented.
<b>Expected CP Outcome(s):</b> Environment and Sustainable Development
<b>Expected UNDAF Output (s)</b> <ul style="list-style-type: none"> <li>• The Coordination Body for Sustainable Development (CBSD) is able to design and implement priority environmental management and sustainable development initiatives;</li> <li>• Expanded collaboration between key stakeholders in the area of environmental management for sustainable development on national and sub-regional levels;</li> <li>• Increased institutional capacity to implement international conventions and agreements;</li> <li>• New financial mechanisms and partnerships are introduced for the environmental protection</li> </ul>
<b>Implementing Entity/Responsible Partners:</b> UNDP
<b>National Implementing Partner:</b> Rwanda Environment Management Authority
<b>National Partner Agency:</b> Rwanda Electricity Corporation
<b><u>Brief Description</u></b>
Polychlorinated Biphenyls (PCBs) are a class of synthetic organic chemicals. Since the 1930s, PCBs were used globally for a variety of industrial uses (mainly as dielectric fluids in capacitors and transformers but also as flame retardants, ink solvents, plasticizers, etc.) because of their chemical stability. In the 1970s it became generally recognized that their chemical stability also represented a serious threat to human health and the environment if they were released. PCBs are considered to be immune-toxic and affect reproduction with specific adverse effects associated to the chronic exposure being damage to the immune system, liver, skin, reproductive system, gastrointestinal tract and thyroid gland. While local impacts close to the source of release of these chemicals into the environment are of concern, the primary impacts are widely distributed and effectively global in nature, given the chemical's characteristics of bio-accumulating higher in the food chain and being subject to long range, multi media transport mechanisms.

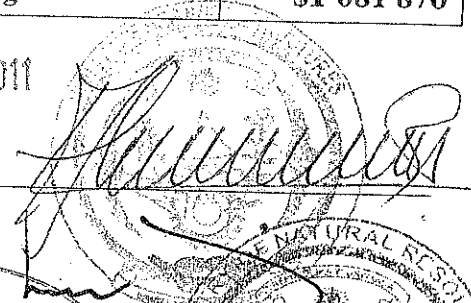
<sup>1</sup> For UNDP supported GEF funded projects as this includes GEF-specific requirements  
<sup>2</sup> <http://planipolis.iiep.unesco.org/upload/Rwanda/Rwanda-UNDAF-2008-2012.pdf>

Programme Period:		<b>Total resources required</b>	<b>\$1 968 570</b>
Atlas Award ID:	00061958	GEF Financing	\$886 700
Project ID:	00079116	<b>Co financing</b>	
PIMS #	4274	Cash EWSA	\$660 102
Start date:		In kind EWSA	\$198 318
End Date		cash UNDP	\$149 930
Management Arrangements	NIM	in kind REMA	\$73 520
PAC Meeting Date	TBD	<b>Total co financing</b>	<b>\$1 081 870</b>

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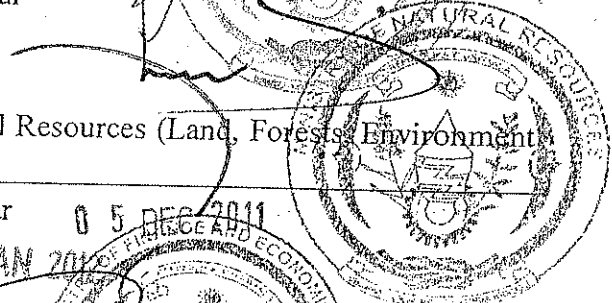
Agreed by Hon. Albert Nsengiyumva, Minister of Infrastructure

Date/Month/Year



Agreed by Hon. Stanislas Kamanzi, Minister of Natural Resources (Land, Forests, Environment and Mining)

Date/Month/Year



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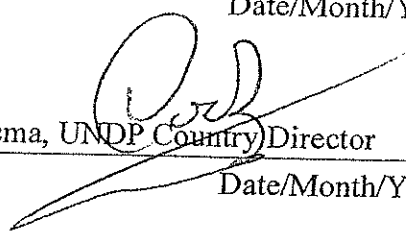
Agreed by Hon. John Rwangombwa, Minister of Finance and Economic Planning

Date/Month/Year



Agreed by Auke Lootsma, UNDP Country Director

Date/Month/Year



## Acronyms

ADR	International Carriage of Dangerous Goods by Road
ARR	Annual Review Report
AWP	Annual Workplan
BEP/BAT	Best Environmental Practice and Best Available Technologies
CDR	Combined Delivery Report
CEIT	Countries with Economies in Transition
CEO	Chief Executive Officer
CP	Country Programme
CPD	Country Programme Document
FAO	Food and Agriculture Organization
FSP	Full Size Project
GDP	Gross Domestic Product
GEF	Global Environment Facility
GOST	State Standards
HQ	Headquarters
IA	Implementing Agency
IW	Inception Workshop
M&E	Monitoring and Evaluation
MEA	Multilateral Environmental Agreement
NEAP	National Environmental Action Plan
NGO	Non-governmental Organization
NIM	National Implementing Partner
NIP	National Implementation Plan for the Stockholm Convention
OFP	Operational Focal Point
PB	Project Board
PBM	Project Board Meeting
PCB	Polychlorinated biphenyls
PDF	Programme Development Facility
PIC	Prior Informed Consent
PIR	Project Implementation Report
MU	Programme Management Unit
POPs	Persistent Organic Pollutants
PPG	Project Preparation Grant
RCU	Regional Coordination Unit
SAEPF	State Agency for Environmental Protection and Forestry
SAICM	Strategic Approach to International Chemicals Management
SIEG	State Inspections for Energy and Gas
SRF	Strategic Resource Framework
TOR	Terms of Reference
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNDP	United National Development Programme
UNDP CO	UNDP Country Office
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNITAR	United Nations Institute for Training and Research

## 1. SITUATION ANALYSIS

### 1.1 Global context and significance

#### 1.1.1 Issue background and baseline

Rwanda ratified the Stockholm Convention in July 2002. Since then, this Convention has been in force in the country. The National Implementation Plan was submitted to the Stockholm Convention Secretariat on May 30, 2007.

During the NIP development, due to lack of statistics and file registers, it was difficult to estimate the quantities of PCBs used in Rwanda, or to identify equipment import dates. In addition to electric equipment sector, PCBs were probably used in hydraulic fluids, lifting machines or special paints imported for various applications.

The initial inventory covered each four provinces of the country and Kigali, the capital. It focused mainly on transformers. This initial inventory made it possible to inspect 986 units out of approximately 1,012 existing in Rwanda. The year of manufacture of the devices inspected goes from 1961 to 2005. One has to note that out of 986 listed units 58 have no date of manufacture, and this equipment may contain PCBs. The data collected in October 2005 indicated existence of 343 transformers assumed to contain PCBs as dielectric fluids. This corresponds to around 154 tons of fluids containing PCBs and 353 tons of solid wastes contaminated with PCBs. In addition, two sites were considered as being potentially contaminated by PCBs oils. Also, information collected during the inventory revealed practices which facilitate the spread of PCBs and PCBs contaminated wastes.

#### Situation of inventory in 2005

Total estimated population of transformers	1,012
Number of units inspected by the inventory team	986
Period of manufacture for inspected population	1961 – 2005
Number of units assumed to contain PCB or PCB contaminated fluid	343
Total weight of PCB and PCB contaminated fluid	154 tons
Total weight of solid components assumed to contain PCB or PCB contaminated impregnated in porous parts and surface contamination in non porous parts	353 tons
Number of sites inspected and visually contaminated	2 sites

The objective of this project is to reduce environmental and human health risks from PCBs releases through the introduction of cost-effective environmentally sound management (ESM) to PCB oils, equipment and wastes held by electrical utilities in the country.

The Project Preparation Grant (PPG) was funded by the GEF, resulting in – amongst others – the following findings:

- That the country does not have specific regulations or administrative mechanisms governing PCB oils, equipment and wastes;
- That owners of PCB equipment currently lack the means to apply environmentally sound management practices to PCB equipment in service, in storage or out of service;

- That despite awareness-raising efforts during NIP preparation, owners and holders of PCB oils, equipment and wastes are frequently unaware of the threats that PCBs pose to human health and the environment;
- That environmentally-sound infrastructure for storage and destruction is not available in the country
- That there are no systematic investment mechanisms to support enterprises with the environmentally sound management of their PCB wastes.

As a result, PCBs are being released to the environment both at unprotected maintenance and storage sites; and during waste management operations concentrating on metals recovery. Furthermore, PCB fluids are being mixed with mineral dielectric oils during maintenance and subsequently reused in previously uncontaminated transformers, thereby cross-contaminating, potentially, the whole transformer population.

Owners and holders of PCB equipment are hampered in their efforts to improve management standards because the relatively small market for such work in each country inhibits local investment by service providers. Access to international service provision is both difficult and expensive. Current local waste management of PCB equipment results in uncontrolled PCB releases from unprotected metal reclamation or, worse, the selling of PCB oils for local open uses. Such uses pose significant health and environmental threats and are not permitted under the Stockholm Convention.

The approach of this project is to encourage the introduction of Environmentally Sound Management (ESM) regimes at national level within a regionally harmonized framework. This approach provides a regional market opportunity for service providers to deliver cost-effective ESM for PCB oils, equipment and wastes whilst building national and regional capacities.

The NIP at the time of its development recognized the need to urgently organize a national dialogue between the principal stakeholder parties in PCB management issues. The NIP and PCB section were drawn up to target progressive withdrawal of PCB equipment and safe handling and disposal of PCB materials and wastes. However, the plan is based on expectations of international cooperation since no sufficient resources are available in the country. Among the activities, it was planned to (1) complete PCB inventory through enhanced cooperation with the Government bodies and equipment holders and selection of options for PCB disposal (2) Support the legislation to aid the operation of PCB management system (3) build and strengthen local capacities with sensitization of the public and stakeholders, (4) ensure environmentally sound PCB management and disposal of PCB equipment, oils and waste material.

The main identified holder of PCB transformers is RECO (The National Electricity Company) representing actually more than 95% of the whole transformer population. At the end of 2006, the enterprise was using 135 transformers which are assumed to contain PCBs. Also, 373 disconnected transformers manufactured with PCB were stored at the company's premises. Thus, the company will be involved as the principal project partner and co-financier.

Institutionally, the responsibilities for various aspects of PCB management need to be defined and put in a clear institutional framework. The primary responsibility for the issue in terms of international obligations and basic regulatory implementation is the Rwanda Environment Management Authority (REMA). Competence and responsibility for issues associated with determination of maximum allowable concentration and, in part, definitions and management of hazardous waste lies with the Ministry of Environment and Lands (MINELA). Regulatory control responsibility for electrical equipment along with the principle major technical competence in the area lies with the Ministry of Infrastructure (MININFRA). Through a common interest in the POPs issue, the Ministry of Agriculture and Animal Resources who is responsible for obsolete pesticide management is also a significant institutional stakeholder, particularly where common regulatory measures, infrastructure, technical expertise and training are involved.

Finally, the significant issues associated with import and export of PCBs which constitute an immediate Convention compliance concern underline an important role for the Rwanda Revenue Authority. There

should be a general recognition of this diverse range of institutional stakeholders and an interagency coordinating structure should be developed. Under the chairmanship of REMA, the Inter-Agency Working Group on Implementation of the Stockholm Convention should be established and operate although the process of its official empowerment.

A final major area that transcends the above limitations is the need for a substantially greater level of awareness about the PCB issue and the country's obligations respecting their environmental sound management. This applies at all levels from the public generally, communities that might be immediately affected, NGOs and private business through to the various government stakeholders. Of particular importance are holders of PCB equipment and service providers involved in its installation, servicing and maintenance. There are substantial needs related to training in the evaluation, handing, storage, and disposition of PCBs both with this group and at the inspection and enforcement level in the various responsible government institutions.

### 1.1.2 Global and environmental benefits

The major global environmental benefit of the project is the mitigation or elimination of risks associated with the release of PCBs into the environment and their subsequent global distribution with resultant ecological and human health impacts from exposure to this chemical. This will be achieved directly during the project period by activities related to comprehensive inventory including PCB analysis and computerized tracking system, to the capture, secure storage and disposal of PCBs stockpiles and waste (Component 4). It will also be achieved indirectly through strengthening technical, regulatory and institutional capacity (Components 2 and 3). Human exposure will be reduced through systematic use of task based risk assessment approach to define the standard of operation during maintenance, transportation, storage, maintenance of transformers containing PCBs

In the near term this will have an immediate global impact through elimination of historic practices where PCBs and PCB contaminated material appears to have been randomly disposed of and exported for direct recycling and re-use, both likely resulting in release of PCBs into the general environment and subsequent global distribution. In the longer term, these project components provide a basis for sustaining environmentally sound management of yet to be identified PCBs as well as other POPs components through to their environmentally sound elimination in accordance with the Stockholm Convention. The following summarizes specific global environmental benefits attached to the reduction in POPs release that will be derived from the project:

- Developing capacity for identification, assessment, prioritization, and clean up action on PCB contaminated site, thus creating capacity to further reduce evaporation and global distribution of PCBs
- Strengthening capability to effectively monitor and analyze for PCBs in the environment and human receptor paths enabling better decision making on priority actions in preventing uncontrolled PCB release.
- Phasing out program of 500 tons PCB containing equipment from service in compliance with the provisions of the Stockholm convention
- Providing physical capacity to secure present and future PCB stockpiles such that random release is prevented until they are destroyed. This covers an estimated 150 tons of PCB oil and PCB contaminated mineral oil and 350 tons of contaminated equipment that might otherwise be released.
- Elimination of exposure risk to PCBs to workers exposed to PCB during service operations on transformers in use and during recycling activities

The project also provide broader global benefits into the future through the linkages that it has with introducing and expanding sound chemicals management concepts and a strategic approach to international chemicals management (SAICM). At a practical level, the further development of POPs management capability generally and specifically the life cycle approach applied to ESM of PCB, the

introduction of Best Available Technologies and Best available practices such as zoning and Task Based Risk assessment applied through the phases of life cycle of PCB contribute to the development of hazardous waste management infrastructure and capacity to address contaminated sites and past environmental liabilities in addressing the broader chemicals management issues and as such contributes to the country's ability to make its contribution in this area of global impact.

### 1.1.3 Linkages with CP, UNDAF and CCA

The project is aligned with the National Action Plan contained in the National POPs Implementation Plan (NIP). Rwanda's specific policy priorities and commitments related to POPs are defined by Prime Minister's Order number 26/03 in October 2008, determining the list of chemicals and other prohibited pollutants.

In parallel, the country has made similar policy commitments to a number of other chemicals related environmental conventions and agreements. These include the Montreal Protocol (2000) and all its current amendments (2003, 2005), the Basel Convention on the Control of Trans-boundary Movement of Hazardous Waste and its Disposal (1996), the Rotterdam Convention on Prior Informed Consent (PIC) for Certain Chemicals and Pesticides. Rwanda has also subscribed to the 2008 Dubai Declaration on a Strategic Approach to International Chemicals Management (SAICM).

It fits with the country's evolving priorities associated with sound chemicals management as reflected in the other priority environmental management initiatives related to addressing national priorities associated with other POPs issues, hazardous waste management and SAICM that are being supported by the Government.

The NIP is part of national programmes, such as National Adaptation Programme to climate change (NAPA), and the Economic Development and Poverty Reduction (EDPRS). The NIP and other national environmental projects should be complementary and the NIP development and implementation should be integrated into an overall national system for the sound management of chemical substances, as it would provide obligatory observance of precautions, prevention and systematic control of pollution. POPs monitoring should be a harmonic part of the national system for ecological monitoring. POPs should be a separate part of all directions of ecological policy including the overall procedure for state bodies' reporting on chemical substances, in systems of raising the population's awareness about the environmental situation, forming social assistance for nature conservancy programmes, training staff and creating a material, technical and scientific base.

The project is consistent with UNDAF and Country Programme Action Plan through the following outcomes and outputs:

- UNDAF (2008-2012) outcome:
  - An enabling policy framework to support an effective system for environment management and ecosystem conservation established
- Country Programme Action Plan (2005-2010) outputs:
  - A national IEC programs on POPs is operational starting in 2007;
  - Toxicological information on POPs, alternatives to POPs and dangerous chemical products in general are available and accessible to those in needs
  - Targeted programs of informal training are elaborated and carried out in 2007 ;

- The country has operational programs of formal training on POPs adapted to the local conditions.

### 1.2 Key Barriers

The overarching barrier to reversing this situation is the absence of national capacity and resources to do so, something that is directly linked to the country's modest means, and underlies the importance of international assistance. At a more specific level, the following major barriers can be identified and which are being explicitly targeted in the project's design:

- Incomplete knowledge on the extent and impact of the PCB issue: A significant information gap remains that limit the ability to define the physical extent of the issue in terms of the how much PCB equipment, stockpiles/wastes, where all the contaminated sites exist, and what their impacts are. The 2005 inventory was based on data of manufacturing and no analysis was done for assumed PCB transformers and contaminated sites. Mineral oil have been cross contaminated from the maintenance works and cause of one to three retrofilling exercises done on each assumed PCB transformer we may have more transformers with contaminated oil than PCB transformers.
- Limited awareness about the issue and dissemination of knowledge on how to address it. The level of awareness generally is low, particularly at a practical level among key stakeholders including technical and environmental regulators, customs officials, recycling activities and equipment holders. The means to collect and disseminate information and skills necessary to increase this awareness are also lacking.
- Absence of effective regulatory instruments: The necessary detailed regulations and standards to ensure that PCBs can effectively be captured and managed remain to be put in place leaving significant opportunities for avoidance and ultimately continuing release of PCBs into the general environment.
- Limited availability of technical tools: There are key gaps in technical capacity in the form of required analytical capability, and supporting procedures, techniques and practices to address knowledge barriers, support regulatory control, and plan for sustainable management of PCBs into the future.
- Absence of infrastructure and operational capacity: Currently, even if PCBs could be identified and captured there is no dedicated capacity to physically provide for its environmentally sound management. Having basic physical capacity to secure POPs stockpiles and wastes, with resources and operational capacity to start ESM disposal is urgently required.

However, the country appears now to have decided to effectively address these issues.

### 1.3 Stakeholder analysis

During the NIP development and preparation of the current project<sup>3</sup> a stakeholder analysis was performed which is summarized below.

Ministry/Department	Function
Ministry of Environment and Lands	Overall policy oversight, monitoring & institutional support. The Ministry of Environment and Lands coordinates resource mobilization, allocation & accountability
REMA	Develops and implements policies for environmental protection, conservation of biological diversity and forest ecological systems,

<sup>3</sup> Due to ongoing government changes, the roles of listed government stakeholders may be adjusted and such changes will be taken onboard when initiating the project implementation



	rational use of natural resources, sustainable development of mountain areas and assure the state's ecological security. It organizes and implements government control over environmental protection and natural resources use; implements multilateral environmental agreements (MEAs); and licenses uses, releases, transport, storage and disposal of toxic materials and waste, including radioactive. oversight responsibility within REMA assigned to the State Environmental Inspection that acts as Stockholm Convention Contact point and the GEF Focal Point
the Rwanda Revenue Authority	The Rwanda Revenue Authority is a quasi-autonomous body charged with the task of assessing, collecting, and accounting for tax, customs and other specified revenues. This is achieved through effective administration and enforcement of the laws including those related to prevention of harmful chemical substances or potentially toxic chemical substances.
Ministry of Health	Develops and implements policies to prevent harmful influence of chemical substances on human health and people livelihoods, administers national registers of potentially toxic chemical substances in the country. It monitors pesticides including POPs.
Ministry of Agriculture and Animal Resources	Develops and administers policies on the use of fertilizers and pesticides in agriculture. It also takes part in controlling water resources from chemical pollution.
National University of Rwanda and Kigali Institute of Sciences and Technology	They aim to generate and disseminate high quality multi-disciplinary knowledge and promote effective research, skills training and community service for national competitiveness and sustainable socio-economic development. Their vision is to become innovative, world class and self-sustainable Universities that are responsive to national, regional and global challenges.
Ministry of Health	Develops and implements policies related to occupational health associated with chemical production and use.
Ministry of Infrastructure	Implements necessary measures and develops rules on any type of transport of chemical substances.
Ministry of Trade and Industry	The Ministry is responsible for development and industrial development policy and issues related to standardization and metrology.
Ministry of Interior	Implements government control over illegal application of chemical substances.
Ministry of Justice	Carries out governmental registration of all normative-legal statements related to chemical management.

The project will closely work with awareness raising and trainings at PCB holder level. This group will be specifically targeted by the project to further promote ESM of PCB materials and future waste.

The project will be implemented in close coordination and collaboration with relevant government institutions, regional authorities, industries, public and local authorities and NGOs, as well as with other related relevant projects in the region.

There are a number of related international initiatives planned or underway in Rwanda and regionally with which this project will coordinate activities and some of which will provide beneficial parallel financing. The following lists these specific initiatives:

- Coordination with initiative will serve to link the PCB management into the developing national framework for hazardous waste management as well as overall development of the national environmental management system.
- The terminal Phase out Management Plan (TPMP) project is aimed at phasing out the consumption of the remaining chlorofluorocarbons (CFCs) in the country and sustaining the phase out process of the CFCs regulated by the Montreal Protocol on substances that deplete the ozone layer. The TPMP will utilize a combination of regulatory, capacity building, investment and awareness measures to assist Rwanda to meet its Ozone Depleting Substances (ODS) phase out obligations.
- The National Cleaner Production Center in Rwanda will enhance the competitiveness and productivity of industry and promote sustained social advance in a way compatible with environmental protection. The center will respond to the main environmental concerns faced by local companies in Rwanda, with a specific focus on the priority sectors selected for the project such as inefficient use of resources (energy, water, raw materials and chemicals); environmentally unfriendly, unsafe and cost ineffective manufacturing of foodstuff, textiles, chemicals, leather products and metal parts.
- This linkage effectively represents parallel financing to the project. This is in addition through waste management regulatory work under AFLDC: Capacity Strengthening and Technical Assistance for the Implementation of Stockholm Convention National Implementation Plans (NIPs) in African Least Developed Countries (LDCs) of the COMESA Sub-region.
- Sound chemicals management work will be linked to the project through involvement by UNDP in SAICM Quick Start Trust Fund Projects being undertaken. These are a UNDP/UNEP administered project entitled "Rwanda, UNDP, and UNEP Partnership Initiative for the Integration of Sound Management of Chemicals Considerations into Development Plans and Processes in parallel financing) and the UNITAR QSP project entitled "Updating a National Chemicals Management Profile, Developing a National SAICM Capacity Assessment, and Holding of a National SAICM Priority Setting Workshop in Rwanda (20,000 USD). These initiatives provide a mechanism for mainstreaming PCB management to the development of a sound chemicals management framework in the country.

#### **1.4 Baseline analysis**

The project has been designed to incorporate actions required to develop a sustainable capability to meet the obligations of the Convention within the institutional and regulatory frameworks that exist in the parties participating in the project. The costs of doing so thus represent incremental costs that would not be incurred if the Convention had not prompted them.

All the costs due to the planned activities of the project are directly linked to the fulfilment of obligations of all the participating countries towards the Stockholm Convention: regulatory infrastructure and management of PCBs and PCB contaminated equipment, transport and destruction of PCBs up to 2028 and building stakeholders' awareness. Without the GEF funds and funds of other donors, the participating countries would not, either individually or as a group, be able to implement those activities that are beyond their financial capacities.

In the absence of international assistance and specifically GEF funding, it is reasonable to assume that progress on the implementation of the NIP and efforts toward compliance with the Stockholm Convention would be minimal.

## 2. Strategy

### 2.1 Project Rationale and Policy Conformity

The project is designed to be aligned with GEF strategic programs and priorities, and specifically the POPs Focal Area Strategy and GEF-4 STRATEGIC PROGRAM(s): POPs-SP1, POPs-SP2, which corresponds to objective CHEM-1 under GEF-V. However as this project belongs to GEF-IV, the strategies of that time are being used in the following paragraph.

At a high level the POPs Component directly supports the overarching GEF goal for the POPs focal area, namely protection of human health and the environment by assisting countries to reduce and eliminate production, use, and releases of POPs, and consequently contribute generally to capacity development for the sound management of chemicals.

Following from this goal, the strategic objective of the GEF under the POPs focal area, in the mid-term is to assist eligible partner countries to implement their obligations under the Stockholm Convention and to achieve the purposes of the Convention, including reducing and eliminating production, use, and releases of POPs. The GEF goal and its strategic objective are directly addressed in the project objective and its overall design. Similarly the project outcomes and the indicators match the impacts and main indicators defined in the GEF strategy, as applicable to PCBs. In meeting these objectives, the project is designed to fall under GEF POPs Strategic Program 1 (Strengthening capacity for NIP development and implementation) and Strategic Program 2 (Partnering in investments for NIP implementation).

In the case of Strategic Program 1(SP1), Rwanda should be considered a country that, while having completed a basic NIP, still has significant capacity limitations in terms of the knowledge base, tools, and capability to be able to undertake substantive implementation of it. Therefore it requires a broad range of assistance in capacity strengthening and urgent actions directly related to current Convention compliance short falls. As such, a priority for GEF assistance would be attached to the country under SP1 as a country currently lagging behind in NIP implementation. More specifically, the country needs to expand the information base defining the scope of the PCB issue, substantively increase awareness of the issue and its implications, implement the basic practical regulatory measures needed to exercise effective control over PCBs, and be equipped with the basic technical tools to support these activities. Components are specifically designed to achieve this with outcomes that are aligned with the overarching SP1 outcome of the country having the capacity to implement the measures required to meet their obligations under the Convention, including POPs reduction measures. Similarly, the projects outputs are aligned with the overall SP1 indicators, namely: i) legislative and regulatory framework in place in supported countries for the management of POPs and the sound management of chemicals in general; ii) strengthened and sustainable administrative capacity, including chemicals management administration within the central government in supported countries; and iii) strengthened and sustainable capacity for enforcement in supported countries.

The project also addresses the objectives of With respect to Strategic Program 2 (SP2). Indeed, the country, while still requiring basic capacity strengthening, has immediate requirements for assistance in infrastructure to ensure urgent risks of PCB releases are addressed. Furthermore, notwithstanding its limited financial capacity, the government and public sector, involved in the production, transport distribution of electricity are willing to provide significant co-financing to these ends, thus does represent a country that demonstrates a willingness to follow through on their commitment to phase out/reduce the targeted POPs (PCBs) which is to be targeted under SP2. The project design is directly aligned with the SP2 objective of achieving impacts through the reduction of use and releases, and reduction of the impact on human health and the environment caused by POPs (PCBs) through the development of capacity to replace PCBs in use, capture and securely store PCBs stockpiles and waste, and to destroy available PCB stockpiles and wastes. This is consistent with the desired SP2 outcome of reducing POPs (PCBs) use and

releases, through phase-out, destruction in an environmentally sound manner, and use of substitute products and alternative processes, that lead to reduced environmental and health risks resulting from POPs (PCBs). The key indicators for SP2 covering PCBs phased out and destroyed and reduced population exposure are generally aligned with those adopted for project outputs, noting that in this case population exposure reduction is difficult to quantify given the likely very wide distribution of exposure associated with traditional practices being eliminated by the project. Finally, it may be noted that the project outcomes are also aligned with GEF-5 POPs outcomes.

The project is in line with ORGANIC LAW N° 04/2005 OF 08/04/2005 determining the modalities of protection, conversation and promotion of environment in Rwanda.

## 2.2 Project Goal, Objective, Outcomes and Outputs/activities

The overarching theme that underlies the GEF Project Scenario described below is providing the country with the tools to achieve effective compliance with respect its Convention obligations and the objective of substantively minimizing the environmental and health risks, both local and global. The project design has been developed to specifically address the principle barriers identified above within the overall project component framework set out in the original PIF but with appropriate expansion and modification of outcomes and outputs based on the PPG work.

The five project components listed in the Project Framework are described below along with the sub-components each of which are aligned with the outcomes and outputs.

*Component 1* - Complete PCB inventory through enhanced cooperation with the Government bodies and equipment holders and selection of options for PCB disposal.

GEF	Co financing	Total	EWASA	UNDP	REMA
\$ 95 900	\$ 30 000	\$ 125 900	\$ 28 000	\$ 2 000	\$ 0

The expected outcome is the following: PCBs numbers in stocks, equipment and waste are updated; and early/mature equipment replacement schemes are in place to be subject to agreed disposal options

2 sub-components are:

- **Output 1.1:** Updated the PCB inventory per category of holders (database) and reinforced local capacity to maintain and update PCB inventory on annual basis; this covers the necessary further development of a national PCB inventory that fully captures all in-service PCB equipment, as yet unidentified PCB stockpiles and wastes, and initiates the process of establishing an inventory of potentially PCB contaminated sites. It will focus on: obtaining on-site verification and updating of preliminary data inventory completed in 2005, sampling and PCB screening testing of dielectric oil of all transformers in use and out of use labelling transformers, identifying where cases of transformer oil replacement (retrofilling) and cross contamination may exist during maintenance, tracking mechanisms of equipment containing PCB until final disposal through life cycle approach (data management, mapping, reporting, and information exchange capability). This component involves 30 RECO site technicians who will be trained for this purpose. This component will be linked to the development of regulations related to registration and labelling (component 2: Legislative support to aid the operation of PCB management system) This involves provision of a primary support tool for sustaining the inventory process as well as Convention reporting obligations on an ongoing basis to be used by RECO and REMA.

The methodology of PCB analysis recommended during the implementation of the PPG-phase is the density test to identify PCB oil and quantification of chlorine in mineral oil. The lab will be located in RECO facilities and staff for lab will be provided by RECO after appropriate training.

- Output 1.2: RECO (principal PCB holder) and other possible holders are accessed to establish a partnership scheme(s) for early/mature equipment replacement. This covers the completion of a phasing out program including criteria to keep in use the transformers or for decommissioning and replacement, an international tender for PCB disposal abroad including road and maritime transportation and high temperature incineration.

GEF co-financing of this component (70% of total cost) will be directed to local consultants undertaking these sub-components, international experience inputs as required, the purchase of PCB sampling and analysis equipment for inventory verification work, restitution workshop for dissemination of updated inventory results and phasing out program. National co-financing (30%) will be provided through staff and logistics cost contributions from RECO principally for use of its field staff in the identification of PCB containing equipment and stockpiles (95% of national co financing). Additional international cash co-financing will come from contributions from UNDP's country office (5% of national co financing).

*Component 2- Legislative support to aid the operation of PCB management system*

GEF	Co financing	Total	EWASA	UNDP	REMA
\$ 77 500	\$ 25 000	\$ 102 500	\$ 1 250	\$ -	\$ 23 750

The Outcome is: PCB legislation and management guidelines adopted.

This component addresses the major gaps in national regulation identified through a life cycle approach: export and import, use, maintenance, transport, storage, disposal, recycling to reduce the health impact of PCB and the release and transfer of PCB in the environment. The sub-components involved address the specific regulatory measures that will be developed as outputs. These are:

Output 2.1: PCB legislation and technical guidance developed and implemented. This covers the establishment of a general regulatory requirement that all PCB containing equipment in-service as well as PCB stockpiles and wastes be registered, labelled, operated/ secured to minimize risk of PCB release, and their status be regularly verified and reported. It will include identification, labelling and inspection, control of PCB at the import and export points, licensing of PCB related activities, handling, transport, storage, control of used mineral oil and metallic scraps, recycling, requirement for holders to develop a PCB Management Plan including control and tracking of PCB in use until the end of life. This kind of regulatory measure represents the basic mechanism that will allow tracking and ultimate capture of PCBs for eventual elimination.

The Ministry of Environment will have the responsibility to monitor the implementation of the PCB regulation that will be in force which will include:

- Control of the updated inventories issued by all PCB stakeholders ( private and public sector) using the tracking tool
- Control of the custom statistical import and export data relevant to articles and chemicals containing PCBs
- Administrative survey / control of utilities containing PCB equipment : storage, maintenance workshop, recycling metallic scraps and uses oils

- Monitoring of contaminated sites by PCB

Additionally, the Awareness and information activities will be extended to public sector who will be informed/trained to consider the additional PCB issues in their ongoing enforcement, execution of which is a part of the government in-kind contribution (ensuring sustainability etc).

- Output 2.2: Developed and established rules to avoid cross-contamination of the oils and equipment; rules/procedures on handling contaminated oils/equipment and labelling. Development of technical guidance implementing PCB regulative framework applicable to handling, transport, maintenance and storage covering tracking requirements, safety procedures, zoning and Task Based Risks assessment, and generally Best Available technologies and best available practices. Development of technical guidance for the monitoring of PCB transfer in environmental media and human receptors such that impacts can be monitored consistent with international standards will be implemented and especially in the food chain which is considered for the main source of health impact of PCB.

GEF co-financing of this component (\$ 77,500 and 70% of the total cost) will be directed to local consultants undertaking these sub-components, international experience inputs as required. National co-financing (\$ 32,500 and 30 %) will be provided through staff and logistics cost contributions from the three principal institutional stakeholders in the government involved in regulatory control of POPs, REMA.

Component 3 - Stakeholders and public sensitized, PCB equipment holders handle equipment in well informed and responsible manner.

GEF	Co financing	Total	EWASA	UNDP	REMA
\$ 50 000	\$ 15 500	\$ 65 500	\$ 8 000	\$ -	\$ 7 500

The outcome is: Public sensitization and information of PCB risks and PCB holders aware and avoid equipment leakages and cross-contamination.

This component addresses specific support technical capacity needs related to PCB management, awareness, regulatory and operational perspectives. As such it is intended to directly support the other components and their outputs. It includes 2 sub-components as follows:

Output 3.1: Public and stakeholders awareness campaigns conducted.

This involves support to PCB holders in the development of awareness related to the health and environmental impact of PCB through the life cycle approach: technicians exposed to the impacts of PCBs during transport operations, handling, maintenance and storage, the risks associated with uncontrolled oil recycling and metal parts. This part of the program is a critical step in the ownership of the program. RECO technicians will operate handling, transport, maintenance and storage of equipment containing PCBs because of the toxicity of these products to handle for many years without special precautions.

Output 3.2: Promoted safe and proper equipment handling at holders; holders trained on leak handling, safeguarding and repairing of old/damaged equipment. This involves the training of personnel in the safe handling of PCBs and PCB-containing equipment, including for their temporary storage and transportation and maintenance, in the elaboration of standards and capacity building for contaminated site management, strategy for pre-treatment and disposal of PCB stockpiles: the liquid PCB wastes will

be exported to safe disposal facilities adhering to BAT-BEP and solid parts of PCB contaminated transformers will be treated by cleaning technology in order to recycle the metallic scraps which can provide significant additional co funding for RECO.

Special training will be dedicated to the evaluation of risks associated with the use of transformers containing PCBs and their presumed impact on the environment including the overage, corrosion, proximity to sensitive sites with the aim of establish a phasing out and elimination plan. This involves using the outputs from the inventory development work to prepare a plan for the phase out of PCB containing equipment in the country, consistent with the schedule requirements in the Convention. It will use the detailed inventory and implemented regulations on registration as its primary inputs. It will particularly examine the potential for the use of equipment replacement incentives to accelerate phase out.

100% of the GEF financing for this component is specifically directed capacity building ensured by national and international expert services.

Component 4 – Safe disposal of PCB equipment, oils and waste material

GEF	Co financing	Total	EWASA	UNDP	REMA
\$ 574 700	\$ 872 170	\$ 1 446 870	\$ 821 170	\$ 51 000	\$ -

The outcome is: PCB equipment and oils collected, transported and stored; export for disposal of PCBs equipment, oils and waste is operational.

This component constitutes the major technical assistance component of the project and is directed to developing the basic infrastructure and expertise needed to ensure secure handling, transport, maintenance, storage for PCB wastes and stockpiles to be accumulated in the future, support environmentally sound disposals of priority stockpiles available during project implementation and undertake detailed feasibility work on developing local/regional capacity to process PCB stockpiles such that disposal costs are optimized. The four sub-components are elaborated as follows:

**Output 4.1:** Assessed existing locations for safe PCB equipment storage; selected existing storage facility upgraded for storage and transformer draining and PCB packaging, facility safety procedures setup.

This sub-component capitalizes on the commitment of RECO to assume national responsibility for PCB stockpile and waste storage. These will be based in existing RECO premises under their responsibility. These will be developed in accordance with specifications consistent with guidance provided by the Basel Convention and adopted by the Stockholm Convention<sup>4</sup>. The discarded transformers from private sector (except RECO) will be safeguarded in RECO's premises.

**Output 4.2:** Collected PCB equipment / packaged oils and waste sent for storage location(s).

This sub component includes the transport of PCB discarded equipment from existing location to the central storage of RECO. RECO will provide vehicle equipped with metallic bin and trained staff for the road transportation in compliance with ADR regulation which will be adopted by competent authorities in Rwanda. The transformers will be drained and secured before transportation.

<sup>4</sup> <http://www.basel.int/pub/techguid/tg-POPs.pdf>

The total quantity expected for transportation is 150 tons of liquid and 350 tons of solid. The unit cost for local transportation is calculated on a flat rate of \$ 150 per ton and is provisioned in the budget as an in kind contribution of RECO.

Output 4.3: Agreed disposal plan put in place and completed:

- Equipment replacement scheme promoted at EWASA to replace up to 42 transformers. Some of PCB and PCB contaminated transformers are already discarded disconnected and stored in the opened site located near the EWASA workshop; others are in use on the transport and distribution network. The new transformers are available for replacement. The average unit cost of new transformers is estimated by EWASA at 15,000 USD for a rated power of 250 Kva. The replacement cost transformers represent the biggest part of co financing (32% of total cost and 63% of co financing).
- Max 150 tons of PCB oil disposed of through export. The project is estimated to have the capacity to provide for environmentally sound disposal of max 150 tons of PCB oil and PCB contaminated mineral oil through export to EU qualified facilities. This export option is needed considering the relative low quantity of PCB liquid to be disposed of and the lack of local facilities. The drained transformers will be transported for secure storage. Because retrofilling practices, the number of transformers containing pure PCB oil will be probably low and most of them are assumed to contain mineral oil, contaminated by low concentrations of PCB. Based on the retention factor of PCB in porous parts, it is considered generally that 20% of the PCB concentration in the mineral oil is remaining in the porous parts. That means the solid parts of transformers with a PCB concentration in the mineral oil lower than 250 ppm will have a PCB concentration in solid parts lower than 50 ppm. This sub component involves an international tender including the transfer shipment procedure in compliance with the Basel convention, the packing of PCB wastes in maritime containers, the road transport between Kigali and Dar El Salaam, the maritime transportation between Dar El Salaam and port of entry of the import country for disposal, the transportation between port of entry and the disposal facility and the high temperature incineration in a licensed facility. The total cost of this sub component is 2,000 USD per ton (packing cost not included in this component).

Packing for storage and shipment	\$ 231 per ton
road transport between Kigali and Dar El Salaam	\$ 300 per ton
Maritime transportation and local transportation in the import country	\$ 700 per ton
Treatment cost of pure PCB oil by high temperature incineration	\$1,000 per ton
Treatment cost PCB contaminated mineral oil by high temperature incineration.	\$250 per ton

- UP to 350 tons of PCB contaminated solid waste material packed and safely stored. All solid and liquid parts will be safeguarded in the secure storage of RECO. The liquid PCB waste will be packed in UN drums in compliance with IMDG and ready for shipment. The unit cost for the storage operation is \$ 231 USD per ton.

The disposal management option selected for the destruction of PCBs is primarily to dispose of liquid wastes containing PCBs and heavily PCB contaminated solid wastes and store low PCB contaminated solid waste. The storage of waste with no PCBs liquid phase present specific risks such as fire or exposure to rain water and uncontrolled recycling. These risks can be mitigated if they are stored in an appropriate building until decontamination if necessary and recycling



The central storage (500 sq.m) will be located in the premises of RECO in Kigali. Storage areas will be designed in compliance with international standards of classified installations for hazardous chemicals and specifically for PCB in order to prevent the release of PCBs to the environment by any route. Storage rooms, areas or buildings will be designed using specifically the zoning and the task based risk assessment.

GEF co-financing related to secure storage will cover upgrading costs specifically those involving imported equipment such as materials handling, security, fire protection, and safety equipment with the major portion of the costs being nationally co-financed by RECO in the form of providing suitable sites, buildings and operational care and custody. National co-financing in the form of staff time and logistics support will be provided by RECO in the form of in kind contributions

### Component 5 – Project management

GEF	Co financing	Total	EWASA	UNDP	REMA
\$ 88 600	\$ 139 200	\$ 227 800	\$ 0	\$ 96 930	\$ 42 270

The project management involves REMA staff and national expert for administrative follow up and accounting. The table below provides a summary cost estimate covering the proposed GEF scenario by Component and Sub-Component described above and cross referenced with outcomes and outputs. The table below provides a summary cost estimate covering the proposed GEF scenario by Component and Sub-Component described above and cross referenced with outcomes and outputs.

Component	Outputs	Total cost	GEF Financing (a)	Co-Financing (b)	Cash RECO	In kind RECO	cash UNDP	in kind REMA
1 - Complete PCB inventory through enhanced cooperation with the Government bodies and equipment holders and selection of options for PCB disposal	1.1. Updated the PCB inventory per category of holders (database) and reinforced local capacity to maintain and update PCB inventory on annual basis;	\$ 123 900	\$ 95 900	\$ 28 000	\$ 0	\$ 26 000	\$ 2 000	\$ 0
	1.2. RECO (principal PCB holder) and other possible holders are accessed to establish partnership scheme(s) for early/mature equipment replacement	\$ 2 000	\$ 0	\$ 2 000	\$ 0	\$ 2 000	\$ 0	\$ 0
2. Legislative support to aid the operation of PCB management system	2.1 PCB legislation and technical guidance developed	\$ 37 500	\$ 22 500	\$ 15 000	\$ 0	\$ 1 250	\$ 0	\$ 13 750
	2.2 Developed and established rules to avoid cross-contamination of the oils and equipment; rules/procedures on handling contaminated oils/equipment and labeling.	\$ 65 000	\$ 55 000	\$ 10 000	\$ 0	\$ 0	\$ 0	\$ 10 000
3. Stakeholders and public sensitized and PCB equipment holders handle equipment in well informed and responsible manner (capacity building)	Public awareness campaigns conducted. Promoted safe and proper equipment handling at holders; holders trained on leak handling, safeguarding and repairing of old/damaged equipment	\$ 65 500	\$ 50 000	\$ 15 500	\$ 0	\$ 8,000	\$ 0	\$ 7 500
4. Safe disposal of PCB equipment, oils and waste material	4.1. Assessed existing locations for safe PCB equipment storage;	\$ 307 150	\$ 221 048	\$ 86 102	\$ 20 102	\$ 15 000	\$ 51 000	\$ 0
	4.2. Collected PCB equipment / packaged oils and waste sent for storage location(s);	\$ 75 000	\$ 6 270	\$ 68 730	\$ 10 000	\$ 58 730	\$ 0	\$ 0
	4.3. Agreed disposal plan put in place;	\$ 1 064 720	\$ 347 362	\$ 717 338	\$ 630 000	\$ 87 338	\$ 0	\$ 0
5 - Project management		\$ 227 800	\$ 88 600	\$ 139 200	\$ 0	\$ 0	\$ 96 930	\$ 42 270
Total		\$ 1 968 570	\$ 886 700	\$ 1 081 870	\$ 660 102	\$ 198 318	\$ 149 930	\$ 73 520

### 2.3 Project Indicators, Risks and Assumptions

The Project Indicators, Risks and Assumptions are fully represented in the Strategic Results Framework (Annex A) as well as the Risk Identification and Mitigation tables in the corresponding GEF CEO Endorsement Document (Section G). It is strongly advised to refer to these indicated annexes and sections of the CEO endorsement document.

#### 2.4 Incremental Reasoning and Incremental Cost Analysis

This incrementality may be considered as permitting a series of efficient precautionary actions that will reduce future costs likely to be incurred in the region and globally to address human health problems and remediate an environment damaged by PCBs chemical pollution.

Some of the current practices of country that contribute to increase the environmental costs are:

- The absence of regular control on importation of equipment containing PCBs that tends to increase unintentionally the amount of PCBs in the country, particularly in the private sector.
- No control from electrical utilities while purchasing new or second hand equipment that tend to increase the amount of PCBs in their facilities.
- The absence of sound environmental management of electrical equipment that contribute to increase the amount of PCB contaminated equipment and mineral oil through cross-contamination during repair or maintenance.
- Contamination of soil and environment at sites of production and distribution of electricity.
- No control on phased out equipment that are recycled in the informal sector that contribute to pollute the environment and ecosystems; and open uses of oils impact directly on human health.
- Absence of separation of PCB and non-PCB contaminated equipment that increase the cost of destruction based on the cost of PCB destruction.

In this context, the activities planned in the project will contribute to decrease environmental costs related to PCBs in the country; some of the activities are given below:

- The implementation of a regulatory framework in the country that will reduce and stop unintentional PCB importation, which will also reduce costs for destruction and environmental costs related to their use.
- The implementation of a sound environmental system for the management of electrical equipment will reduce cross contamination and hence reduce destruction cost.
- The implementation of this sound management system will also allow to
  - Reduce amount of contaminated soil
  - Contamination of eco-systems and food chain
- A national approach also reduces costs with regard to handling, collection and transportation. Difference between individual and grouping operations can be significant using international tendering for transport and disposal.

Given the base case of essentially no action on implementation of the Convention in the absence of GEF funding, all GEF funding and associated co-financing is considered to be addressed to incremental costs. Similarly, GEF funds are to be directed to achieving project outcomes which meet the global project environmental objectives and which result in significant global environmental benefits. Likewise, the project outcomes and the resultant global environmental benefits match with the GEF goals, objectives and strategic programs for the POPs Focal Area during GEF-4 as described in Section C above.

The co-financing associated with the project involves funds that would not otherwise have been spent to achieve the outcomes and objectives above in relation to global environmental benefit, as opposed to national benefit, and to maintaining Convention compliance. It is acknowledged that there are national benefits from the project overall and from the GEF's contribution, in terms of prevention of local environmental and human exposure. However, these benefits apply equally in a global context. Similarly, the technical and regulatory strengthening co-financed by the GEF also has significant local benefits though enhancing local capability in environmental protection generally. However, their benefits are recognized by the GEF strategy documentation as being globally significant as well. In effect national benefits are coincident with global benefits, rather than being independent of them.

As described above in defining the base line or "business as usual" situation, the level of global environmental benefit in terms of POPs release reduction in the absence of the GEF's intervention would not occur with substantive implementation of the NIP not being initiated. For this reason, all project activities are associated with incremental costs, as are costs that would reasonably apply to supporting broader chemicals management where linked to PCB management activities.

The Incremental Cost Matrix prepared in the CEO endorsement document provides an overall summary of the incremental costs, both the GEF and co-financing estimated for the project, linked specifically to the project outcomes from Annex A of CEO Endorsement, the baseline, and global environmental benefits.

## **2.5 Country Ownership: Country Eligibility and Country Drivenness**

Since the year 1980, several international legal instruments have been adhered to and Rwanda is already a party to:

- The Convention on Biological Diversity and its Habitat signed in Rio de Janeiro on 5 June 1992 as approved by Presidential Order n° 017/01 of 18 March 1995;
- The United Nations Convention on Climate Change signed in Rio de Janeiro on 5 June 1992 and ratified as approved by Presidential Order n° 021/01 of 30 May 1995;
- The Stockholm Convention on Persistent Organic Pollutants signed in Stockholm on 22 May 2001 and ratified as approved by Presidential Order n° 78/01 of 08 July 2002;
- The Rotterdam Convention on the establishment of international procedures agreed by states on commerce transactions of agricultural pesticides and other poisonous products, signed in Rotterdam on 11 September 1998, and in New York from 12 November 1998 to 10 September 1999 and ratified as approved by Presidential Order n° 28/01 of 24 August 2003 approving the membership of Rwanda;
- The Basel Convention on the control of transboundary movements of hazardous wastes, their disposal and their elimination, was adopted in Basel on 22 March 1989 and ratified as approved by Presidential Order n° 29/01 of 24 August 2003 approving the membership of Rwanda.
- The Vienna Convention on the protection of Ozone Layer, signed in Vienna (1985) and the four protocols on substances that deplete the ozone layer signed in Montreal (1987), London (1990), Copenhagen (1992), Beijing (1999), specifically in article 2 of the London amendment and article 3 of Copenhagen, Montreal and Beijing amendments as approved by Presidential Order n° 30/01 of 24 August 2003 related to the membership of Rwanda;
- The Cartagena Protocol on Bio safety to the Convention of Biological Biodiversity opened to signature in Nairobi from 15 May to 26 May 2000 and in New York on 04 June 2001 and ratified by Rwanda as approved by Presidential Order of 38/2003 of 29 December 2003;
- The Kyoto Protocol on the Framework Convention on Climate Change adopted in Kyoto on 6 March 1998 and ratified by Rwanda as approved by Presidential Order n° 36/2003 of 29 December 2003;

The PCB management involves the following environmental multilateral agreements:

- Import and export transport use and disposal of PCB with the provisions of the Basel, Rotterdam and Stockholm Convention
- Use with the Kyoto protocol (energy saving with replacement of PCB equipment)
- ESM of PCB with SAICM (life cycle approach)

The project is specifically aligned with the National Action Plan contained in the NIP. The Table below illustrates the correlation between PCB related NIP Action Plan provisions and the proposed project.

The PCB is listed as prohibited for import, export and disposal in the legislation regulating the chemical substances.

The project is specifically aligned with the National Action Plan contained in the NIP. The Table below illustrates the correlation between PCB related NIP Action Plan provisions and the proposed project.

PCB Related NIP Action Plan Provisions	Proposed Project Component/Outcome/Output
1° Information, sensitization and training the stake holders about the PCBs.	Outcome 5: inception workshop Outcome 3 : capacity building of public and private sector on the ESM of PCB through the life cycle approach BAT and BEP Outcome 1: restitution workshop on inventory updated Outcome 2: dissemination workshop Outcome 3: training workshops
2° Reinforcement of institutions and regulations.	Outcome 2: Updating existing regulation and drafting PCB national regulation
3° Rational ecologic management of wastes resulting from unintentional production of PCBs.	Outcome 2: PCB regulation regarding the recycling of PCB oil and PCB contaminated mineral oil as co fuel Outcome 3 : Management of PCB during recycling activities
4° Management of polychlorinated biphenyls (PCBS: Annex A) and their packaging materials.	Outcome 1 : PCB inventory and computerized tracking system including disposal plan Outcome 2: Updating existing regulation and drafting PCB national regulation Outcome 3 : capacity building of public and private sector on the ESM of PCB through the life cycle approach BAT and BEP Outcome 4: PCB transport, storage and disposal
5° Supervision and research-development.	Outcome 3: BAT approach for disposal of PCB solid waste Outcome 5: supervision included in the project management activities
6° Management of stocks and wastes from POPs containing pesticides.	NA
7o Sound ecologic management of contaminated sites.	Outcome 1: inventory of contaminated sites Outcome 3: building capacity for management of contaminated sites Outcome 4: BAT approach for wastes resulting from remediation of contaminated sites
8° System of information exchange and participation with international cooperation	Outcome 1: computerized tracking system (database access and exchange at national, regional and international level

The project also fits with the countries evolving priorities associated with sound chemicals management as reflected in the other priority environmental management initiatives related to addressing national priorities associated with other POPs issues, hazardous waste management and SAICM that are being supported by the Government.

## 2.6 Type of financing support provided with GEF resources

The financing support provided will be in the form of a grant that serves to cover costs where foreign expenditures are required and along with UNDP's cash co-financing where local costs may be efficiently covered, recognizing the limited government and enterprise resources available to address PCB issues generally. However, the GEF grant will leverage significant in-kind and cash co-financing for the project that would otherwise not be devoted to this global issue. This type of Grant funding is consistent with the GEF Focal Area Strategy as described above.

## 2.7 Sustainability

At a high level, the primary sustainability requirement for the project is that the capacity developed by it remains intact and is utilized as the country moves forward with PCB and broader POPs and sound chemicals management activities into the future. The primary mechanism that the project design incorporates to achieve this is the approach of matching the specific sub-components with the institutions that currently have expertise and who would be responsible for them into the future. This is intended to ensure that a high level of ownership is achieved and the results are broadly championed for use into the future. An integral part of this overall approach is capitalizing on Inter-Agency Working Group on Implementation of the Stockholm Convention under the chairmanship of REMA, such that sustainability is not undermined by institutional fragmentation.

Another strategic feature of the project design that will promote sustainability is the recognition that this is just one of a number of related initiatives being undertaken in the country and which are mutually reinforcing and have common purpose within the evolving framework of sound chemicals management being embraced as a major national environmental priority. The above interagency mechanisms will allow these various initiatives to transfer and share information as well as gain economies and build networks through joint training, potentially infrastructure development and generally through building a network of experts with common interests.

Within the above framework, the detailed project design at the component and sub-component level has a number of features that are intended to promote sustainability as noted below:

The project places a high emphasis on training, guidance material, and information exchange, largely at a practical working level where skills in PCB management are directly required and can be immediately applied. All training conducted under the project will utilize written and replicable training materials and a "train the trainers" approach, notably embedding this training in the curriculum of national training institutes such as those utilized by the Ministry of Power and Ministry of Health.

The project aims to ensure an end to the occurrence of illicit practices associated with re-use, trade and import/export as well as the likely random disposal of PCB oils and wastes of PCB and has proposed effective regulatory interventions for doing so. This is supported by regulation and awareness initiatives that should ensure that the rules and the implications of avoidance are well known. However the ability to sustain a change in practice also requires the availability of cost effective and competitive alternatives, something the project will provide the basis for through development of secure storage capability, setting up modalities for public/private sharing of liabilities for disposal, and creating incentives for replacement of PCB equipment.

The project substantively contributes to the sustainability of PCB phase out in the longer term through its support of a formal long term PCB phase out plan and supporting the investigation of local treatment for

low contaminated PCB wastes and disposal options which will collectively provide the government with a "road map" in addressing future PCB stockpile issues.

Ensuring the long term care and custody of any stored PCBs stockpiles (like any hazardous waste generally) is a fundamental sustainability issue. The project substantively mitigates this through the assumption of that responsibility by the government through the Ministry of Power as a long term obligation. This also sets a useful precedent for effective use of state backstopping of such liabilities.

Environmental sustainability and integrity of the near term operational aspects of PCB management funded under the project are underpinned by the application of a safeguards approach to the specification and monitoring applied to secure storage facility development and stockpile disposal operations. This is specifically achieved through the use of a qualified technical expert to provide technical support and monitoring of these particular outputs.

## 2.8 Replicability

Given the particular status of Rwanda as a small country that has only just starting to aggressively address the PCB issue, the project is primarily a beneficiary of experience developed elsewhere. However, the approach used to consolidate institutional stakeholders and focus on specific barriers and priorities to initiate actual action may have application in other countries. In addition, there potentially are some specific aspects of the project that could be replicable. These include:

- The adoption of a regional perspective of the issue, particularly in relation to facilities/technology development and addressing import/export questions that result in non-compliance with the Convention. We are concerned the treatment and recycling of low contaminated PCB solid and liquid wastes: metal scraps and mineral oil. Proactively integrating PCB management with other initiatives related to POPs, hazardous waste management and sound chemicals management through a cooperative rather than competing approach between initiatives such as the ESM of used mineral oil, the recycling activities of co fuel. Focusing responsibilities where practical expertise and working level involvement exists in undertaking PCB management activities such as tracking system with databases

Project Strategy	Objectively verifiable indicators	Baseline	Target	Sources of verification	Assumptions
<p><b>Objective:</b> Minimizing environmental and health risks associated with PCBs through strengthening technical and regulatory capacity for the environmentally sound management and disposal of PCBs in Rwanda</p>	<ul style="list-style-type: none"> <li>Established and sustainable operational and regulatory capacity undertaking identification and management of PCBs in compliance with Stockholm Convention obligations by 2020</li> <li>1. Legislation and guidelines adopted 2. Central warehouse with 350 tons of waste 3. Tonnage of PCBs safely disposed</li> </ul>	<ul style="list-style-type: none"> <li>NIP adopted based on preliminary knowledge of issue.</li> <li>Absence of implementation capacity, either institutionally or physically.</li> <li>Fragmented institutional responsibility for issue.</li> </ul>	<ul style="list-style-type: none"> <li>Functional regulatory regime covering import/export, identification, capture and securing PCBs for future disposal.</li> <li>Operation capacity for ESM of current and future stockpiles and waste.</li> <li>Informed PCB holders and qualified service providers to undertake PCB management activities.</li> <li>Clear assignment of responsibilities within the government.</li> </ul>	<ul style="list-style-type: none"> <li>Regulatory monitoring of sources of PCBs and work of service providers.</li> <li>National environmental performance reports.</li> <li>Country Convention compliance status reporting.</li> <li>Project Progress and M&amp;E reports : Official Gazette2.</li> <li>Visit reports with photographs</li> <li>3. Disposal Certificate</li> </ul>	<ul style="list-style-type: none"> <li>Overall government commitment and assumption of appropriate responsibility.</li> <li>Regulatory enforcement resources and capacity available.</li> <li>Accurate monitoring and reporting.</li> <li>Availability of candidate service providers in the government and/or private sector.</li> </ul>
<b>1 - Complete PCB inventory through enhanced cooperation with the Government bodies and equipment holders and selection of options for PCB disposal</b>					
<p><b>Outcome 1(a): 1.1.</b> Updated the PCB inventory per category of holders (database) and reinforced local capacity to maintain and update PCB inventory on annual basis</p>	<ul style="list-style-type: none"> <li>Detailed inventory of PCB containing and contaminated equipment in service, existing PCB waste stockpiles and PCB contaminated sites in place end of 2011</li> <li>Data management and tracking system operational and used for reporting end of 2011.</li> <li>Supply of lab equipment and consumables for the screening of 1200 units with staff trained in their use by 2011.</li> </ul>	<ul style="list-style-type: none"> <li>Incomplete inventory of in service equipment and inventories of PCB waste stockpiles, cross contaminated equipment and contaminated sites.</li> <li>No formal consolidated PCB information system or associated reporting capability.</li> <li>Absence of capability to cost-effectively identify and categorize PCB contaminated materials acting as a major barrier to inventory development and tracking</li> <li>Currently no laboratory is equipped to specifically undertake PCB analysis</li> </ul>	<ul style="list-style-type: none"> <li>Tracking system for in-service equipment, waste stockpiles and contaminated sites that will be maintained on an ongoing basis</li> <li>Publically accessible PCB information system operational, maintained, and used for reporting and information exchange under the Convention</li> <li>One accredited national laboratory capable of doing routine PCB analysis in soil, water and air samples inclusive of trained personnel and accessible to responsible regulatory authorities, PCB holders and service providers</li> <li>Screening capacity to effectively support tracking</li> </ul>	<ul style="list-style-type: none"> <li>On-site verification by trained experts.</li> <li>Screening sampling results.</li> <li>Regulatory reporting on labeling and registry measures.</li> <li>Convention reporting.</li> <li>Obligation of response from stakeholders.</li> <li>Validation of information as PCB management activities are implemented.</li> <li>Use in convention reporting.: Database hosted in REMA</li> <li>Regulatory reporting on labeling and registry measures.</li> <li>Data base reports</li> <li>Project Progress and M&amp;E reports.</li> <li>Legal agreements on access and use.</li> <li>Procurement documents on supply of equipment as</li> </ul>	<ul style="list-style-type: none"> <li>Cooperation of PCB holders (RECO and private sector).</li> <li>Parallel implementation of labeling and registration measures.</li> <li>Ongoing budget support for monitoring and sampling.</li> <li>Responsible agency assigned and resourced to operate and maintain system.</li> <li>Detailed tracking system available</li> <li>Cooperation of PCB holders</li> <li>Availability of personnel.</li> <li>Availability and accepted internationally accepted screening tools.</li> <li>Commitment of authorities to sustain the capability.</li> <li>Availability and agreement on long term access to a suitable facility for purposes of</li> </ul>

INDICATORS	TARGET	SOURCES OF VERIFICATION	ASSUMPTIONS
<ul style="list-style-type: none"> <li>Technical instructions on identification, sampling, data management</li> </ul>	<ul style="list-style-type: none"> <li>Availability and application of technical instructions for management of current and future PCB inventories and tracking system</li> </ul>	<ul style="list-style-type: none"> <li>Project Progress and M&amp;E reports</li> <li>Expanded identification of PCB equipment in inventory</li> <li>Lab manuals</li> </ul>	<ul style="list-style-type: none"> <li>Government commitment to support the operation of such a facility in the long term.</li> <li>Implementation of regulatory labeling and registry measures.</li> <li>Cooperation of PCB holders.</li> <li>Availability of authorized service providers</li> </ul>
<ul style="list-style-type: none"> <li>Phase out program and disposal plan established by the end of 2011</li> <li>Purchase of new transformers</li> </ul>	<ul style="list-style-type: none"> <li>Availability and application of technical instructions for management of current and future PCB inventories and tracking system</li> <li>Reco staff technically able to manage disposal plan</li> </ul>	<ul style="list-style-type: none"> <li>Project Progress and M&amp;E reports</li> <li>Receipt for transformer purchase</li> </ul>	<ul style="list-style-type: none"> <li>Cooperation of PCB holders.</li> <li>Needed financial resources available for replacement cost</li> </ul>
2. Legislative support to aid the operation of PCB management system			
<ul style="list-style-type: none"> <li>Regulations requiring registration, labeling and status reporting of potential all PCB and PCB containing materials in use end of 2010.</li> </ul>	<ul style="list-style-type: none"> <li>A comprehensive national regulatory registry of all PCB containing equipment in service that is maintained and updated such that its status and fate can be tracked</li> </ul>	<ul style="list-style-type: none"> <li>Project Progress and M&amp;E reports</li> <li>National legal and regulatory registers. Official journal (gazette)</li> <li>Analysis report of PCB inventory results and response rates.</li> </ul>	<ul style="list-style-type: none"> <li>Cooperation and compliance of PCB holders and service providers.</li> <li>Government commitment to timely processing of required regulations.</li> <li>Sustaining government support for enforcement of regulatory measures and compliance reporting on them</li> </ul>
<ul style="list-style-type: none"> <li>Adoption of appropriate hazardous waste classification of PCBs and PCB contaminated materials in 2010.</li> </ul>	<ul style="list-style-type: none"> <li>Explicit inclusion of high concentration PCB wastes as priority hazardous wastes in national waste management legislation/regulations.</li> <li>Consistency of these with applicable international standards and the Basel Convention on trans-boundary movement of hazardous waste.</li> </ul>	<ul style="list-style-type: none"> <li>National legal and regulatory registers.</li> <li>Equivalency comparisons with international standards.</li> <li>Basel convention reporting.</li> </ul>	<ul style="list-style-type: none"> <li>Government commitment to timely processing and application of required regulations.</li> <li>Acceptance of international experience and precedents respecting regulatory practice and standards.</li> </ul>
<ul style="list-style-type: none"> <li>Enactment of legal ban on new use, re-use, trade, import, and export of PCBs and PCB</li> </ul>	<ul style="list-style-type: none"> <li>Effective implementation and enforcement of use, re-use, trade, import and export bans</li> </ul>	<ul style="list-style-type: none"> <li>National legal and regulatory registers.</li> <li>Customs reporting information</li> </ul>	<ul style="list-style-type: none"> <li>Cooperation and compliance of PCB holders, service providers and customs</li> </ul>



Sources of verification	Assumptions
<ul style="list-style-type: none"> <li>• C through inventory reporting, and effective identification, labeling and registry of PCB contaminated equipment in service.</li> <li>• Compliance reporting required of potential PCB holders under applicable regulations.</li> <li>• Basel Convention reporting.</li> </ul>	<ul style="list-style-type: none"> <li>• officials.</li> <li>• Government commitment to timely processing of required regulations.</li> <li>• Acceptance of international experience and precedents respecting regulatory practice and standards.</li> <li>• Sustaining government support for enforcement of regulatory measures and compliance reporting on them</li> </ul>
<ul style="list-style-type: none"> <li>• Project Progress and M&amp;E reports</li> <li>• National legal and regulatory registers.</li> <li>• Compliance reporting required of potential PCB holders under applicable regulations.</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation and compliance of PCB holders and service providers.</li> <li>• Government commitment to timely processing of required regulations.</li> <li>• Sustaining government support for enforcement of regulatory measures and compliance reporting on them</li> </ul>
<ul style="list-style-type: none"> <li>• Transport equipment authorized and controlled by competent authorities</li> <li>• PCB management chart in force in RECO utilities during maintenance operations</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation and compliance of PCB holders and service providers.</li> <li>• Government commitment to timely processing of required regulations.</li> <li>• Sustaining government support for enforcement of regulatory measures and compliance reporting on them</li> </ul>
<ul style="list-style-type: none"> <li>• Mitigation of cross contamination</li> <li>• Mitigation of risks of leakage and PCB pollution during transport and handling</li> </ul>	<ul style="list-style-type: none"> <li>• Sustaining capacity to maintain awareness efforts and key programs.</li> <li>• Active participation and partnership with NGO community.</li> <li>• Interest and participation of stakeholders.</li> </ul>
<ul style="list-style-type: none"> <li>• Widely accessible current information on PCBs and ongoing management activities.</li> <li>• Integration into a national information program on sound chemicals management</li> </ul>	<ul style="list-style-type: none"> <li>• Project Progress and M&amp;E reports.</li> <li>• Monitoring of press and media coverage.</li> <li>• Web site utilization</li> </ul>
<p><b>3. Stakeholders and public sensitized and PCB equipment holders handle equipment in well informed and responsible manner (capacity building)</b></p>	
<ul style="list-style-type: none"> <li>• Publicly accessible information on PCBs and their management including: i) a maintained official web site; ii) a widely distributed brochure; iii) media exposure (two annual campaigns during project); iv) information events (two during project).</li> </ul>	<ul style="list-style-type: none"> <li>• Low level of general awareness related to PCBs and chemicals management generally across all stakeholders.</li> <li>• No current information products or programs.</li> </ul>
<ul style="list-style-type: none"> <li>• Public awareness campaigns conducted.</li> </ul>	<ul style="list-style-type: none"> <li>• Low level of general awareness related to PCBs and chemicals management generally across all stakeholders.</li> <li>• No current information products or programs.</li> </ul>

	Target	Sources of verification	Assumptions
<ul style="list-style-type: none"> <li>Educational curricula related to chemicals (including PCBs) impacts on environment and human health, and management actions for addressing the issue during the project.</li> </ul>	<ul style="list-style-type: none"> <li>Limited active educational efforts or tools available.</li> </ul>	<ul style="list-style-type: none"> <li>Inclusion of chemicals management and particularly PCBs in relevant educational programs, and active R&amp;D interest in addressing it.</li> </ul>	<ul style="list-style-type: none"> <li>Sustaining interest and capacity in educational institutions to maintain educational programs.</li> <li>Active participation and partnership with educational and research institutions.</li> </ul>
<ul style="list-style-type: none"> <li>Training and information seminars on chemicals management including PCBs for relevant government agencies, the academic community, affected communities, NGOs, and holders of PCBs ( 22 workshops)</li> </ul>	<ul style="list-style-type: none"> <li>Key stakeholders generally have limited awareness of the issue or actions required of them to address it.</li> </ul>	<ul style="list-style-type: none"> <li>Project Progress and M&amp;E reports.</li> <li>Attendance at training information events.</li> <li>NGO/stakeholder feedback.</li> </ul>	<ul style="list-style-type: none"> <li>Active participation and partnership with NGO community.</li> <li>Interest and participation of stakeholders.</li> </ul>
<ul style="list-style-type: none"> <li>Strategy and plan for pre-treatment and disposal of PCB stockpiles and wastes in place end of 2011.</li> </ul>	<ul style="list-style-type: none"> <li>No plan in place to develop or access pre-treatment or disposal capacity exists for PCB waste stockpiles.</li> </ul>	<ul style="list-style-type: none"> <li>Project Progress and M&amp;E reports.</li> <li>Expert assessment of strategy and plan documentation.</li> <li>Evaluation against international practice and experience, standards, and guidance documents (i.e. Basel Convention, GEF/STAP)</li> <li>government policy adoption here, like minutes of meeting , order of minister of Environment</li> </ul>	<ul style="list-style-type: none"> <li>Detailed inventory accurately estimates long term pre-treatment and disposal needs.</li> <li>Participation of PCB holders, local service providers, scientific experts, and international technology suppliers.</li> </ul>
<ul style="list-style-type: none"> <li>Development of standards and methodologies for ongoing identification and assessment of contaminated sites, inclusive of RECO staff to undertake it.</li> </ul>	<ul style="list-style-type: none"> <li>No capacity exists respecting contaminated site clean-up generally and specifically with respect to PCB contamination.</li> </ul>	<ul style="list-style-type: none"> <li>Project Progress and M&amp;E reports.</li> <li>Expert assessment of standard and methodology documentation.</li> <li>Evaluation against international practice and standards.</li> </ul>	<ul style="list-style-type: none"> <li>Designation of responsible operational authorities and availability of local service providers.</li> <li>Detailed PCB inventory accurately identifies potential contaminated sites.</li> </ul>
<ul style="list-style-type: none"> <li>Long term plan for the monitoring in place and phase out of PCB containing equipment in service consistent with Convention</li> </ul>	<ul style="list-style-type: none"> <li>The phase out of PCB equipment is currently uncontrolled and includes practices such as selling/exporting PCB</li> </ul>	<ul style="list-style-type: none"> <li>Project Progress and M&amp;E reports.</li> <li>Expert assessment of the plan.</li> <li>Concordance evaluation with Convention requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Detailed PCB inventory accurately identifies PCB containing equipment in service and projects its operation life.</li> </ul>

Outcome 3.2:  
Promoted safe and proper equipment handling at holders; holders trained on leak handling, safeguarding and repairing of old/damaged equipment

	Requirements (2025) formally adopted.	contaminated equipment for scrap, sorting used PCB equipment for new or replacement installations, and replacing PCB oils in transformers to de-classify the equipment.	Target the detailed national inventory (Outcome 1), consistent with Convention obligations.	Sources of verification	Assumptions
	<ul style="list-style-type: none"> <li>Technical guidance and training available for handling, transport and safeguarding</li> </ul>	<ul style="list-style-type: none"> <li>No technical capacity available for handling, transport and safeguarding in the country</li> </ul>	<ul style="list-style-type: none"> <li>Secure PCB handling, transport, storage operations</li> </ul>	<ul style="list-style-type: none"> <li>Reporting procedures related to transport of dangerous substances</li> <li>Register output / input for storage</li> </ul>	<ul style="list-style-type: none"> <li>Effective regulatory controls are in place governing the identification, labeling, and status reporting of PCB containing equipment.</li> <li>PCB equipment holder assumption of replacement responsibility.</li> <li>Effective regulatory controls are in place governing the identification, labeling, and status reporting of PCB containing equipment.</li> <li>PCB equipment holder assumption of replacement responsibility.</li> </ul>
<b>4. Safe disposal of PCB equipment, oils and waste material</b>					
Outcome 4.1. Assessed existing locations for safe PCB equipment storage;	<ul style="list-style-type: none"> <li>Secure storage capacity for PCB stockpiles and wastes at RECO sites for PCB material and PCB wastes by end of 2012</li> <li>Operational rules for handling and transport adopted by RECO management</li> </ul>	<ul style="list-style-type: none"> <li>No hazardous waste storage suitable for PCB waste stockpiles is available.</li> <li>No provision for secure storage at holders sites.</li> <li>No handling equipment and secure transport infrastructure available</li> </ul>	<ul style="list-style-type: none"> <li>1 national designated secure storage facility established in RECO premises and equipped with necessary infrastructure for PCB waste stockpiles under continuing care and custody of a responsible government authority.</li> <li>Major holders have secure storage facilities to accommodate PCB contaminated equipment when retired as an option.</li> <li>Mitigation of risks associated with handling and transport of PCBs</li> </ul>	<ul style="list-style-type: none"> <li>Project Progress and M&amp;E reports.</li> <li>Design review documents.</li> <li>Procurement documents.</li> <li>Facility regulatory approvals site visit reports etc.</li> </ul>	<ul style="list-style-type: none"> <li>PCB regulations and detailed inventory in place, phasing out program in place</li> <li>Establishment of sustainable operational and custody arrangements.</li> <li>Timely regulatory approvals.</li> </ul>
4.3 Agreed disposal plan put in place: shipment overseas and final disposal	<ul style="list-style-type: none"> <li>Trained and equipped service providers capable of undertaking packaging, transportation end of 2010</li> <li>Residual contamination cleanup for PCB solid wastes including training of RECO staff by end of 2010.</li> </ul>	<ul style="list-style-type: none"> <li>Limited trained capability in the safe handling of PCB contaminated materials and general absence of such capability among holders of PCBs and private service providers.</li> <li>Some PCB containing electrical equipment (transformers) are in critical applications and have long</li> </ul>	<ul style="list-style-type: none"> <li>Fully operational service provider capacity to support the securing of PCB waste stockpiles and transport to the designated national facility or export for disposal.</li> <li>Establish the feasibility of environmentally sound transformer decontamination locally as an option to</li> </ul>	<ul style="list-style-type: none"> <li>Certifications of service providers and staff.(packing certificate, trans frontier shipment documents).</li> <li>Project Progress and M&amp;E reports.</li> <li>Expert assessment of assessment results and</li> </ul>	<ul style="list-style-type: none"> <li>PCB holder cooperation</li> <li>Cooperation of potential service providers.</li> <li>Local decontamination is cost effective relative to replacement.</li> <li>Existing transformers can be</li> </ul>

Assumptions	Sources of verification	Target
<ul style="list-style-type: none"> <li>practically decontaminated to a low POBs level based in international benchmarks.</li> </ul>	<ul style="list-style-type: none"> <li>decontamination performance</li> </ul>	<ul style="list-style-type: none"> <li>remain service lives.</li> <li>Current practices involving replacement of oil do not meet international standards and result in retention of PCB contaminated equipment.</li> </ul>
<ul style="list-style-type: none"> <li>Availability of suitable disposal facilities.</li> <li>Transit permissions from transit countries.</li> <li>Government leadership in undertaking clear designation of responsible organizations.</li> <li>Cooperation of stakeholder agencies and other organizations.</li> </ul>	<ul style="list-style-type: none"> <li>Destruction certificates</li> <li>Basel convention notices and consent documentation</li> <li>Waste transport tracking documents.</li> <li>Applicable government resolutions.</li> <li>Budget allocations.</li> <li>Demonstration of effective assumption of responsibility by designated organizations.</li> </ul>	<ul style="list-style-type: none"> <li>Environmentally sound disposal of 150 MT of PCB oil and PCB contaminated mineral oil and local experience for future disposal requirements.</li> </ul>

Expected Outcomes	Expected Outputs
<p><b>Outcome 1:</b> PCBs numbers in stocks, equipment and waste are updated; and agreed disposal options</p>	<p>1.1. Updated the PCB inventory per category of holders (database) and reinforced local capacity to maintain and update PCB inventory on annual basis;</p> <p>1.2. RECO (principal PCB holder) and other possible holders are accessed to establish partnership scheme(s) for early/mature equipment replacement</p>
<p><b>Outcome 2:</b> PCB legislation and management guidelines adopted</p>	<p>2.1 PCB legislation and technical guidance developed and implemented</p> <p>2.2 Developed and established rules to avoid cross-contamination of the oils and equipment; rules/procedures on handling contaminated oils/equipment and labelling</p>
<p><b>Outcome 3:</b></p> <ul style="list-style-type: none"> <li>- Public sensitization and information of PCB risks.</li> <li>- PCB holders aware and avoid equipment leakages and cross-contamination.</li> </ul>	<p>3.1 Public awareness campaigns conducted; PCB stakeholders trained in technical guidelines adopted</p> <p>3.2. Promoted safe and proper equipment handling at holders; holders trained on leak handling, safeguarding and repairing of old/damaged equipment</p>
<p><b>Outcome 4:</b> PCB equipment and oils collected, transported and stored; export for disposal of PCBs equipment, oils and waste is operational</p>	<p>4.1. Assessed existing locations for safe PCB equipment storage; selected existing storage facility upgraded for storage and transformer draining and PCB packaging, facility safety procedures setup.</p> <p>4.2. Collected PCB equipment / packaged oils and waste sent for storage location(s);</p> <p>4.3. Agreed disposal plan put in place and completed</p>
	<ul style="list-style-type: none"> <li>- equipment replacement scheme promoted at RECO to replace up to 42 transformers in use;</li> <li>- Max 150 tons of PCB oil disposed of through export;</li> <li>- Max 350 tons of PCB contaminated solid waste material packed and safely stored</li> </ul>

TOTAL BUDGET AND WORKPLAN

<b>Award ID:</b>	58751	<b>Project ID(s):</b>	00073130
<b>Award Title:</b>	RW Management of PCB's Stockpiles and equipment		
<b>Business Unit:</b>	RWA10		
<b>Project Title:</b>	Management and Disposal of PCBs in Rwanda		
<b>PIMS no.</b>	4274 PPG		
<b>Implementing Agency</b>	UNDP		
<b>National Implementing Agency</b>	Rwanda Environment Management Authority		
<b>National Partner Agency</b>	Energy, Water and Sanitation Authority		

Atlas budget account code	Type of expenses	Total Cost	GEF Financing	Co-Financing	Year 1	Year 2	Year 3
<b>Component 1: Complete PCB inventory through enhanced cooperation with the Government bodies and equipment holders and selection of options for PCB disposal</b>							
61100	Professional national Personnel	28 000	0	28 000	28 000	0	0
71200	International consultant	3 200	3 200	0	3 200	0	0
71300	National consultant	39 500	37 500	2 000	39 500	0	0
71600	Travels	2 700	2 700	0	2 700	0	0
72100	Sub contracts	6 000	6 000	0	6 000	0	0
72200	Equipement	36 500	36 500	0	36 500	0	0
74500	Miscellaneous	10 000	10 000	0	10 000	0	0
<b>Total component 1</b>		<b>125 900</b>	<b>95 900</b>	<b>30 000</b>	<b>125 900</b>	<b>0</b>	<b>0</b>
<b>Component 2: Legislative support to aid the operation of PCB management system</b>							
71200	International consultant	9 000	9 000	0	0	4 500	4 500
71300	National consultant	45 000	45 000	0	0	22 500	22 500
71600	Administrative Personnel	22 500	0	22 500	0	15 000	7 500
71600	Travels	8 000	8 000	0	0	4 000	4 000
74500	Miscellaneous	18 000	15 500	2 500	0	9 000	9 000
<b>Total component 2</b>		<b>102 500</b>	<b>77 500</b>	<b>25 000</b>	<b>0</b>	<b>55 000</b>	<b>47 500</b>
<b>Component 3: Stakeholders and public sensitized and PCB equipment holders handle equipment in well informed and sensible manner (capacity building)</b>							
71200	International consultant	20 000	20 000	0	10 000	10 000	0
71300	National consultant	30 000	22 500	7 500	11 250	11 250	7 500
71600	Travels	7 500	7 500	0	3 750	3 750	0
72100	Sub contracts	8 000	0	8 000	5 000	3 000	0
74500	Miscellaneous	0	0	0	0	0	0
<b>Total component 3</b>		<b>65 500</b>	<b>50 000</b>	<b>15 500</b>	<b>30 000</b>	<b>28 000</b>	<b>7 500</b>
<b>Component 4: Safe disposal of PCB equipment, oils and waste material</b>							
71200	International consultant	6 000	6 000	0	0	1 800	4 200
71300	National consultant	18 750	18 750	0	0	5 625	13 125
71600	Travels	2 400	2 400	0	0	720	1 680

72100	Sub contracts	502 220	346 152	156 068	0	150 666	351 554
72200	Equipement	917 500	201 398	716 102	0	275 250	642 250
<b>Total component 4</b>		<b>1 446 870</b>	<b>574 700</b>	<b>872 170</b>	<b>0</b>	<b>434 061</b>	<b>1 012 809</b>
<b>Component 5: Project management</b>							
71300	National consultant	95 600	44 180	51 420	31 867	31 867	31 866
71400	Administrative Personnel	28 000	8 570	19 430	9 334	9 333	9 333
71600	Travels	30 000	14 250	15 750	10 000	10 000	10 000
72200	Equipement	10 000	5 000	5 000	3 334	3 333	3 333
74500	Miscellaneous	64 200	16 600	47 600	21 400	21 400	21 400
<b>Total component 5</b>		<b>227 800</b>	<b>88 600</b>	<b>139 200</b>	<b>75 935</b>	<b>75 933</b>	<b>75 932</b>
<b>Total général</b>		<b>1 968 570</b>	<b>886 700</b>	<b>1 081 870</b>	<b>231 835</b>	<b>592 994</b>	<b>1 143 741</b>

Code	Type of expenses	Total Cost	GEF Financing	Co-Financing	Year 1	Year 2	Year 3
61100	Professional national Personnel	28 000	0	28 000	28 000	0	0
71200	International consultant	38 200	38 200	0	13 200	16 300	8 700
71300	National consultant	228 850	167 930	60 920	82 617	71 242	74 991
71400	Administrative Personnel	50 500	8 570	41 930	9 334	24 333	16 833
71600	Travels	50 600	34 850	15 750	16 450	18 470	15 680
72100	Sub contracts	516 220	352 152	164 068	11 000	153 666	351 554
72200	Equipement	964 000	242 898	721 102	39 834	278 583	645 583
74500	Miscellaneous	92 200	42 100	50 100	31 400	30 400	30 400
<b>Total général</b>		<b>1 968 570</b>	<b>886 700</b>	<b>1 081 870</b>	<b>231 835</b>	<b>592 994</b>	<b>1 143 741</b>



## 1. MANAGEMENT ARRANGEMENTS SEE UNDP POPP FOR FURTHER DETAILS

### Definitions

Project Board is responsible for making management decisions for a project in particular when guidance is required by the Project Manager. The Project Board plays a critical role in project monitoring and evaluations by quality assuring these processes and products, and using evaluations for performance improvement, accountability and learning. It ensures that required resources are committed and arbitrates on any conflicts within the project or negotiates a solution to any problems with external bodies. In addition, it approves the appointment and responsibilities of the Project Manager and any delegation of its Project Assurance responsibilities. Based on the approved Annual Work Plan, the Project Board can also consider and approve the quarterly plans (if applicable) and also approve any essential deviations from the original plans.

In order to ensure UNDP's ultimate accountability for the project results, Project Board decisions will be made in accordance to standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case consensus cannot be reached within the Board, the final decision shall rest with the UNDP Project Manager.

Potential members of the Project Board are reviewed and recommended for approval during the PAC meeting. Representatives of other stakeholders can be included in the Board as appropriate. The Board contains three distinct roles, including:

- 1) An Executive: individual representing the project ownership to chair the group.
- 2) Senior Supplier: individual or group representing the interests of the parties concerned which provide funding for specific cost sharing projects and/or technical expertise to the project. The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project.
- 3) Senior Beneficiary: individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries.
- 4) The Project Assurance role supports the Project Board Executive by carrying out objective and independent project oversight and monitoring functions. The Project Manager and Project Assurance roles should never be held by the same individual for the same project.

**Single Project Implementation Unit:** The Single Project Implementation Unit has the authority to run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Board. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

**Project Support:** The Project Support role provides project administration, management and technical support to the SPIU as required by the needs of the individual project or Single Project Implementation Unit.

The project will be implemented by the national partner, the Rwanda Environment Management Authority, following UNDP guidelines for nationally implemented projects (NIM). The project will be implemented in close coordination and collaboration with all relevant government institutions, regional authorities, industries and NGOs, as well as with other related relevant projects in the region.

The UNDP-CO will be an active partner in the project's implementation. It will support implementation by maintaining the project budget and project expenditures, contracting project personnel, experts and



subcontractors, undertaking procurement, and providing other assistance upon request of the National Executing Agency. The UNDP-CO will also monitor the project's implementation and achievement of the project outcomes and outputs, and will ensure the proper use of UNDP/GEF funds. Financial transactions, reporting and auditing will be carried out in compliance with national regulations and established UNDP rules and procedures for national project execution. PCB holding companies will operate through their revised internal guidelines in procuring replacement equipment and other services as their part of project financing.

In order to accord proper acknowledgement to GEF for providing funding, a GEF logo will appear on all relevant GEF project publications, including, among others, project hardware purchased with GEF funds. Any citation on publications regarding this project will also accord proper acknowledgment to GEF.

### **Tasks of executive structure**

The National project Coordinator will be a high-level government entity primarily responsible for overall implementation of the Project. The appointment is anticipated to be the REMA Chair of the Inter-Agency Working Group on Implementation of the Stockholm Convention or Stockholm Convention Contact Point. This responsibility includes representing and supporting project objectives at high decision making levels within the Government of Rwanda. The Single Project Implementation Unit also takes the primary responsibility for representing the Project to co-financiers, as well as for ensuring that the required government support to reach the milestones of the Project is available.

The National project Coordinator will assume overall responsibility for the successful implementation of project activities and the achievement of planned project outputs. She/he will work closely with the national and international experts hired under the project, as well as the Project Assistant, and will report to the National Project Director and to the UNDP Country Office (UNDP CO). The Administrative and Financial Assistant will provide assistance to the Project Manager in the implementation of day-to-day project activities. She/he is responsible for all administrative (contractual, organizational and logistical) and accounting (disbursements, record-keeping, cash management) matters related to the project.

The Executing Agency/Implementing Partner will establish a Project Board (PB) to give advice and guide project implementation. This is anticipated to be based on Inter-Agency Working Group on Implementation of the Stockholm Convention. This will be chaired by the National Project Director. The PB will consist of representatives of all key stakeholders and will ensure the inclusion of industries' interests. The participants will include but not limited to: REMA, Ministry of Infrastructure, Ministry of Health, Ministry of Agriculture and Animal Resources, Ministry of Disaster Management and Refugee Affairs, National Academy of Science (including National University of Rwanda and Kigali Institute of Science and Technology) along with Industry representation, NGOs and as applicable affected communities. REMA will represent the interests of Senior Beneficiary.

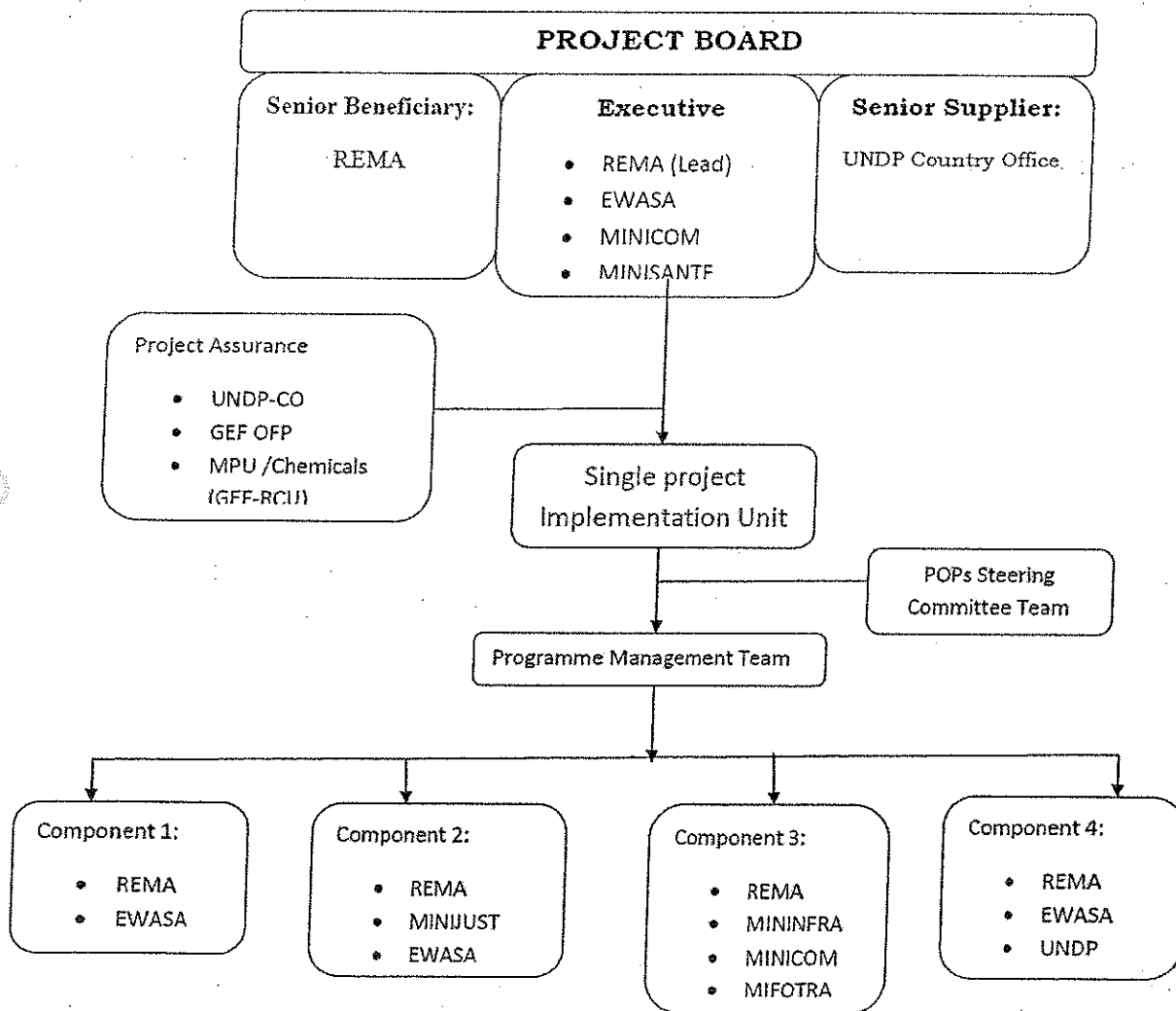
UNDP CO will play the role of Senior Supplier—being a GEF Implementing Agency represented in the country. Project assurance will be ensured by GEF OFP, UNDP CO together with the UNDP GEF RCU. The PB will monitor the project's implementation, provide guidance and advice, and facilitate communication, cooperation, and coordination among stakeholders and other project partners. At the initial stage of project implementation, the PB may, if deemed advantageous, wish to meet more frequently to build common understanding and to ensure that the project is initiated properly. Further details on the PB are provided in the monitoring and evaluation section of the document. The project will hire short-term national and international experts for specific project assignments. Project activities will be contracted out on a competitive basis through tenders.

The project will be implemented in close coordination and collaboration with all relevant government institutions, regional authorities, industries and NGOs, as well as with other related relevant projects in the region. The UNDP-CO will be an active partner in the project's implementation. It will support

implementation by maintaining the project budget and project expenditures, contracting project personnel, experts and subcontractors, undertaking procurement, and providing other assistance upon request of the National Executing Agency. The UNDP-CO will also monitor the project's implementation and achievement of the project outcomes and outputs, and will ensure the proper use of UNDP/GEF funds. Financial transactions, reporting and auditing will be carried out in compliance with national regulations and established UNDP rules and procedures for national project execution.

In order to accord proper acknowledgement to GEF and UNDP for providing funding, a GEF and UNDP logo will appear on all relevant GEF project publications, including, among others, project hardware purchased with GEF funds. Any citation on publications regarding this project will also accord proper acknowledgment to GEF and UNDP. The UNDP logo will be more prominent (and separated from the GEF logo if possible), as UN visibility is important for security purposes.

## PROJECT ORGANISATION STRUCTURE



## 2. MONITORING FRAMEWORK AND EVALUATION

The project will be monitored through the following M& E activities. The M& E budget is provided in the table below.

### Project start:

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

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

- a) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of EWASA as the main holder of PCB and equipment containing PCB, the private sector that hold just a few, REMA, and UNDP vis à vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed as needed.
- b) The GEF-4 and as appropriate GEF-5 Focal Area Strategy inclusive of targets will be presented and linked to project outcomes, outputs and indicators.
- c) Based on the project results framework and the relevant GEF Tracking Tool, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- d) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- e) Discuss financial reporting procedures and obligations, and arrangements for 2 audits during the 3 years of project management.
- f) Plan and schedule Project Board meetings. Roles and responsibilities of all project organization structures should be clarified and meetings planned. The first Project Board meeting should be held within the first 12 months following the inception workshop.

An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

### Quarterly:

- Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of "Energy Savings Consulting Organizations" (ESCOs) are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).
- Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.

- Other ATLAS logs can be used to monitor issues, lessons learned etc... The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

**Annually:**

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

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

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

**Periodic Monitoring through site visits:**

UNDP Country Office will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. The international expert undertaking relevant monitoring, particularly in relation to environmental safeguards will be part of these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

**Mid-term of project cycle:**

The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation (September 2012). The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP Country Office based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office.

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

### End of Project:

An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. This will include input from the Independent expert undertaking environmental safeguards monitoring on the overall environmental performance achieved in relation to PCB storage and disposal activities. The Terms of Reference for this evaluation will be prepared by the UNDP Country Office based on guidance from the Regional Coordinating Unit and UNDP-GEF.

The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office.

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

During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

### M&E Work Plan and budget

Type of M&E activity	Responsible Parties	Budget US\$	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> <li>▪ Project Manager</li> <li>▪ UNDP CO, UNDP GEF</li> <li>▪ International Technical Support/Safeguards Expert</li> </ul>	Staff time	Within first two months of project start up
Measurement of Means of Verification of project results.	<ul style="list-style-type: none"> <li>▪ UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members.</li> </ul>	None	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on output and implementation	<ul style="list-style-type: none"> <li>▪ Oversight by Project Manager</li> <li>▪ Project team</li> </ul>	None	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> <li>▪ Project manager and team</li> <li>▪ UNDP CO</li> <li>▪ UNDP RTA</li> <li>▪ UNDP EEG</li> </ul>	None	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> <li>▪ Project manager and team</li> </ul>	None	Quarterly
Mid-term Evaluation	<ul style="list-style-type: none"> <li>▪ Project manager and team</li> <li>▪ UNDP CO</li> <li>▪ UNDP RCU</li> <li>▪ External Consultants (i.e. evaluation team)</li> </ul>	Indicative cost: 6,000	At the mid-point of project implementation.
Final Evaluation	<ul style="list-style-type: none"> <li>▪ Project manager and team,</li> <li>▪ UNDP CO</li> <li>▪ UNDP RCU</li> <li>▪ External Consultants (i.e. evaluation team)</li> </ul>	Indicative cost: 6,000	At least three months before the end of project implementation

Project Terminal Report	<ul style="list-style-type: none"> <li>▪ Project manager and team</li> <li>▪ UNDP CO</li> <li>▪ local consultant</li> <li>▪ International Technical Support/Safeguards Expert</li> </ul>	Staff time	At least three months before the end of the project
Audit	<ul style="list-style-type: none"> <li>▪ UNDP CO</li> <li>▪ Project manager and team</li> </ul>	2 x 6,000	
Visits to field sites	<ul style="list-style-type: none"> <li>▪ UNDP CO</li> <li>▪ UNDP RCU (as appropriate)</li> <li>▪ Government representatives</li> </ul>	For GEF supported projects, paid from IA fees and operational budget	Yearly
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		US\$ 24,000	

### 3. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the SBAA between the Government of Rwanda and UNDP, signed on February 2<sup>nd</sup>, 1977.

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

The executing agency shall:

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

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

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

**4. ANNEXES**

**Risk Analysis.** Use the standard UNDP Atlas Risk Loq template. For UNDP GEF projects in particular, please outline the risk management measures including improving resilience to climate change that the project proposes to undertake.

The Project Indicators, Risks and Assumptions are fully represented in the Strategic Results Framework (Annex A) as well as the Risk Identification and Mitigation tables in the corresponding GEF CEO Endorsement Document (Section G). It is strongly advised to refer to these indicated annexes and sections of the CEO endorsement document.

**C. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED AND OUTLINE RISK MANAGEMENT MEASURES:**

The overall risk rating attached to project is considered medium recognizing the current state of the country's response to the Stockholm Convention and NIP implementation as balanced by the positive developments made during the PPG stage. The major high level risks to the project's overall objective are largely related to being able to sustain government's renewed policy and financial commitment to addressing the POPs, and the current cooperative rather than fragmented institutional environment addressing the issue. The risk linked with RECO co financing is limited by the GEF fund for disposal released against the purchase of new transformers to replace PCB and PCB contaminated transformers. Mitigation of these risks will largely be linked to continued efforts of the project team in partnership with counterparts in the major government institutions to build policy awareness and maintain appropriate task responsibilities as the project is implemented. At a technical and project management level the principal risks are largely associated with coordination of various tasks and activities such that outputs from one part of the project are fed into other areas that require it. A main example of this is the need for timely implementation of several of the detailed regulatory priorities (registration/labelling and controls on use/reuse and import/export) and the holder/owner to effectively improve the knowledge base for undertaking capture and disposal elements, and planning of longer term PCB management activities. This will be mitigated by exercising a high level of project management control and rigorous monitoring of milestones and deliverables. More strategically it might also be addressed as conditionality attached to disbursement of funds that require putting key regulatory measures in place before release of follow up funding.

Minor climate change risks may be associated with the project. The likely use of a combustion technology for the environmental sound destruction of PCB stockpiles and transportation of this material at significant distance represent an incremental increase in GHG emissions, although small and largely unavoidable. Given, the absence of a readily commercially available disposal facility in the country or immediate region transportation will be necessary to achieve this outcome. Similarly, the selection of technology is likely limited to a combustion process given the absence of any readily accessible facility utilizing a non-combustion process at this time. A balancing positive effect may be achieved where the project is able to stimulate replacement of older and less efficient electrical equipment.

The following provides an overall risk matrix that identifies and rates specific risks identified and mitigation strategy adopted

Risk	Risk rating	Risk mitigation strategy
Government co-financing commitments do not materialize due to diversion	Medium	The major mitigation of this risk will be obtained from the timely availability of GEF funds, give the substantive written co-financing commitments from the major stakeholder agencies (REMA, UNDP and RECO) which are leveraged by

Risk	Risk rating	Risk mitigation strategy
of funding and allocation of staff elsewhere		international assistance. Once in place, the risk of a change in commitment is considered low although the project will need to maintain a high level dialogue with all stakeholders.
Delays in implementing key PCB regulations that delay or reduce the effectiveness of other activities which more directly minimize and/or prevent PCB releases.	Medium	The project will prioritize key PCB regulations to get these measures drafted and subsequently to expedite the adoption process. Consideration will also be given to conditioning disbursement on other activities to progress in processing and adoption of these regulations. Provisions relevant Chemical substances management are existing in the national law and specifically import, export, trade and disposal. PCB is included in the list
Holders of PCB equipment (mainly RECO) generally refuse to provide information or delay compliance with registration regulations until they can eliminate PCB liabilities by illicit means.	Low	The risk of widespread avoidance of regulatory compliance exists recognizing that disposal costs ultimately will be a business liability and scrap value remains attached to drained electrical equipment. Mitigation of this risk will depend on ensuring a high level of awareness of the implications of such illicit activity, providing capacity to at least partially offset liabilities (secure storage/replacement incentives, and aggressive enforcement by REMA and customs authorities. With respect to avoidance involving either import or export, ensuring a dialogue with neighbouring countries under regional arrangements will also assist in preventing these options.
Anticipated stockpiles to be disposed of do not materialize	Medium	The risk will be mitigated by keeping known PCB holders (mainly RECO and the private sector) informed and aware of both the opportunity to eliminate a liability and potentially get support for modernization of existing facilities through the equipment incentive program that will be piloted.
Unacceptably high environmental and/or health risks develop as a result of project activities associated with the handling, storage, transportation and storage of PCBs	Low	The risk will be mitigated by ensuring that any such activities are undertaken in accordance with international standards and good practices. The benchmark used will be the guidance documents issued under the Basel Convention and adopted by the Basel Convention. Verification of all critical activities and facility design and operating practice will be provided by an international expert. All activities will be developed in accordance with BAT/ BEP, Task Based Risk Assessment and Standard of Operations
Depreciation of the US\$ reduces the amount of PCBs eliminated.	Low	It is recognized that an element of exchange risk applies with GEF funding and cost estimates denominated in US\$ while disposal costs will likely be denominated in other currencies tending to strengthen against the US\$ (likely Euros). This risk has been mitigated to some degree by using conservatively selected commercial disposal rates for estimates but remains significant. The impact of reduced capacity in terms of volume of PCBs eliminated would be mitigated by prioritizing those stockpiles having the highest PCB concentration and greatest environmental and/or health risk in the event of release.



**Agreements:** Any additional agreements, such as cost sharing agreements, project cooperation agreements signed with NGOs<sup>5</sup> (where the NGO is designated as the "executing entity", letters of financial commitments, GEF OFP letter, GEF PIFs and other templates for all project types) should be attached.

GEF OFP Endorsement letter is attached to the submission package

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<sup>5</sup> For GEF projects, the agreement with any NGO pre-selected to be the main contractor should include the rationale for having pre-selected that NGO.

### Terms of Reference:

#### Single Project Implementation Unit

Interest in Poly-Chlorinated Biphenyls, PCBs, is due to their harmful effects and tendency for long-range transboundary environmental transport. They have been included in the initial list of globally managed Persistent Organic Pollutants under the Stockholm Convention.

Rwanda is committed to safe management of PCB as demonstrated by signature of the Stockholm Convention and its subsequent ratification on 19 July 2006. For planning appropriate action in the field of controlling POPs substances and releases as well as fulfilling the reporting requirements of the Convention, Government of Rwanda developed an Action Plan for PCB management as a part of its draft National Implementation Plan (NIP) on POPs.

The PCB Action Plan evolved into a project called "Management and Disposal of PCBs in Rwanda" which is a joint undertaking by The Government of Rwanda, public/private sector partners and UNDP. The Global Environment Facility is providing substantive grant funding for co-financing the project.

The Project includes the following components:

**Component 1:** Detailed Identification of PCBs and Enhancing Awareness

**Component 2:** Strengthening of Legislative and Regulatory Measures along with Supporting Institution

**Component 3:** Development of Technical and Institutional Capacity for Sustainable PCB Management and Disposal

**Component 4:** Securing PCB Stockpiles and Wastes.

**Component 5:** Project Management

Reporting directly to the National Project Director, Single Project Implementation Unit will avail its services for the implementation of entire implementation period of the project.

As per UNDP guidelines in force the Single Project Implementation Unit is responsible for

- Timely implementation of the work plan as endorsed by the Project Steering Committee;
- General and financial administration;
- Work planning, scheduling and project progress reporting;
- Monitoring project deliverables and ensuring M&E activities are incorporated in project planning;
- Writing of Terms of Reference for project support staff, project consultants;
- Tendering of contractual services where applicable;
- Monitoring and the quality control, particularly on safety, of input from consultants and subcontractors providing assistance to the project;
- Support the tendering for international services pertaining to PCB waste transportation and disposal;
- Coordinate Documentation related to transboundary shipment of hazardous waste

The Single Project Implementation Unit shall coordinate the contracting of entities responsible for the capacity building, training, transporting, collection and proper storage as well as final disposal of the PCB equipment and monitor their performance.

Duration of assignment: 3 years

**SIGNATURE PAGE**

**Country:** Rwanda

**UNDAF Outcome (s)/Indicator (s):** Good practices at central and local levels for the management of waste and contaminants developed and scaled up

**UNDAF Outcome indicator:** Effective environment management frame work (Institutional policy frameworks for sustainable natural resources management and ecosystem conservation developed and implemented.

**CPAP Outcome (s)/Indicator (s):** Environment and Sustainable Development

**CPAP Output (s)/Indicator (s):**

- The Coordination Body for Sustainable Development (CBSD) is able to design and implement priority environmental management and sustainable development initiatives;
- Expanded collaboration between key stakeholders in the area of environmental management for sustainable development on national and sub-regional levels;
- Increased institutional capacity to implement international conventions and agreements;
- New financial mechanisms and partnerships are introduced for the environmental protection

Implementing entity/Responsible Partner: UNDP

National Implementing Partner: Rwanda Environment Management Authority

National Partner Agency: Rwanda Electricity Board.

Programme Period:		<b>Total resources required</b>	<b>\$ 1 968 570</b>
Atlas Award ID:	00061958	GEF Financing	\$ 886 700
Project ID:	00079116	Co-Financing	\$1 081 870
PIMS #	4274	<b>Co financing</b>	
Start date:		Cash EWASA	\$660 102
End Date		In kind EWASA	\$198 318
Management Arrangements	NIM	cash UNDP	\$149 930
PAC Meeting Date	TBD	in kind REMA	\$73 520
		<b>Total co financing</b>	<b>\$1 081 870</b>

*Agreed by (Government):*

**Annex 2: UNDP Strategic Plan: Key Focal Areas + Key result areas + Provisional Corporate Outcomes**

<i>Key Focal Area</i>	<i>Key result area</i>	<i>Provisional Corporate Outcomes</i>
<p><b>Poverty Reduction and MDG achievement</b></p>	<p>1. Promoting inclusive growth, gender equality and MDG achievement</p>	<ol style="list-style-type: none"> <li>1. MDG-based national development strategies promote growth and employment, and reduce economic, gender and social inequalities</li> <li>2. Enhanced national and local capacities to plan, monitor, report and evaluate the MDGs and related national development priorities, including within resource frameworks.</li> <li>3. Policies, institutions and mechanisms that facilitate the empowerment of women and girls strengthened and implemented.</li> <li>4. Macroeconomic policies, debt-sustainability frameworks, and public financing strategies promote inclusive growth and are consistent with achieving the MDGs.</li> <li>5. Strengthened capacities of local governments and other stakeholders to foster participatory local development for the MDGs.</li> <li>6. Policies, strategies and partnerships established to promote public-private sector collaboration and private-sector and market development that benefits the poor and ensures that low-income households and small enterprises have access to a broad range of financial and legal services.</li> </ol>
	<p>2. Fostering inclusive globalization</p>	<ol style="list-style-type: none"> <li>1. Enhanced capacities of developing countries to compete internationally and to negotiate interpret and implement agreements on trade, intellectual property, and investments in a manner which prioritizes poverty and inequality reduction and human development.</li> <li>2. Strengthened national capacities to negotiate and manage development finance, including aid and debt, consistent with the achievement of the MDGs and other internationally agreed development goals.</li> </ol>
	<p>3. Mitigating the impact of AIDS on human development</p>	<ol style="list-style-type: none"> <li>1. AIDS response integrated into poverty reduction strategies, MDG-based national development plans, and macroeconomic processes.</li> <li>2. Strengthened national capacity for inclusive governance and coordination of AIDS responses, and increased participation of civil society entities and people living with HIV in the design, implementation and evaluation of AIDS programmes.</li> <li>3. Policies and programmes implemented through multi-stakeholder approaches to protect the human rights of people affected by AIDS. Mitigate gender-related vulnerability, and address the impact of AIDS on women and girls.</li> <li>4. Accelerated implementation of AIDS funds and programmes financed through multilateral funding initiatives, including the Global Fund to fight AIDS, Tuberculosis, and Malaria.</li> </ol>
<p><b>Democratic governance</b></p>	<p>1. Fostering inclusive participation</p>	<ol style="list-style-type: none"> <li>1. Civic engagement, through civil society organizations, voluntary associations, trade unions, political parties, and private sector organization, enables all people to influence public policy processes.</li> <li>2. Electoral laws, processes and institutions strengthen inclusive participation and professional electoral administration.</li> <li>3. Communication channels support government accountability and transparency through e-governance, independent journalism, and access to information policies.</li> </ol>
	<p>2. Strengthening responsive governing institutions</p>	<ol style="list-style-type: none"> <li>1. National, regional and local levels of governance expand their capacities to manage the equitable delivery of public services and support conflict reduction.</li> <li>2. Legislatures, regional elected bodies, and local assemblies have strengthened institutional capacity, enabling them to represent their constituents more effectively.</li> <li>3. Effective, responsive, accessible and fair justice systems promote the rule of law, including both formal and informal processes, with due consideration on the rights of the poor, women and vulnerable groups.</li> </ol>

3.	Support national partners to implement democratic governance practices grounded in human rights, gender equality and anti-corruption	<ol style="list-style-type: none"> <li>1. Strengthened national, regional and local level capacity to mainstream human rights in government policies and institutions.</li> <li>2. Strengthened national, regional and local level capacity to mainstream gender equality and women's empowerment in government policies and institutions.</li> <li>3. Strengthened national, regional, and local-level capacity to implement anti-corruption initiatives.</li> </ol>
1.	Enhancing conflict and disaster risk management capabilities	<ol style="list-style-type: none"> <li>1. Solutions generated for natural disaster risk management and conflict prevention through common analysis and inclusive dialogue among government, relevant civil society actors and other partners (i.e. UN, other international organizations, bilateral partners).</li> <li>2. Disaster – strengthened national capacities, including the participation of women to prevent, reduce, mitigate and cope with the impact of the systemic shocks from natural hazards.</li> <li>3. Conflict – strengthened national capacities, including the participation of women, to prevent, reduce, mitigate and cope with the impact of violent conflict.</li> <li>4. Other</li> </ol>
2.	Strengthening post-crisis governance	<ol style="list-style-type: none"> <li>1. Early post-crisis resumption of local governance functions to facilitate recovery.</li> <li>2. Disaster – post disaster governance capacity strengthened, including measures to ensure the reduction of future vulnerabilities.</li> <li>3. Conflict – post-conflict governance capacity strengthened, including measures to work towards prevention of resumption of conflict.</li> <li>4. Other</li> </ol>
3.	Restoring the foundations for development at local level	<ol style="list-style-type: none"> <li>1. Gender equality and women's empowerment enhanced in post-disaster and post-conflict situations.</li> <li>2. Conflict – post-crisis community security and social cohesion restored.</li> <li>3. Post-crisis socio-economic infrastructure restored, economy revived and employment generated; crisis affected groups returned and reintegrated.</li> <li>4. other</li> </ol>
1.	Mainstreaming environment and energy	<ol style="list-style-type: none"> <li>1. Strengthened national capacities to mainstream environment and energy concerns into national development plans and implementation systems.</li> <li>2. Other</li> </ol>
2.	Catalyzing environmental finance	<ol style="list-style-type: none"> <li>1. Countries develop and use market mechanisms to support environmental management.</li> <li>2. other</li> </ol>
3.	Promote climate change adaptation	<ol style="list-style-type: none"> <li>1. Strengthened capacity of developing countries to mainstream climate change adaptation policies into national development plans.</li> <li>2. Other</li> </ol>
4.	Expanding access to environmental and energy services for the poor.	<ol style="list-style-type: none"> <li>1. Strengthened capacity of local institutions to manage the environment and expand environment and energy services, especially to the poor.</li> <li>2. Other</li> </ol>

