



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

PROJECT DOCUMENT

Project for the Republic of the Philippines

Project number:	GF/PHI/07/XXX
Project title:	Global Programme to demonstrate the viability and removal of barriers that impede adoption and successful implementation of available, non-combustion technologies for destroying persistent organic pollutants (POPs)
GEFSEC Project ID:	2329
Thematic area code:	B16
Starting date:	September 2007
Duration:	4 years
Project site:	The Philippines
Government Co-ordinating Agency:	Department of Environment and Natural Resources (DENR)
Counterpart: Executing Agency/ Cooperating Agency	Department of Environment and Natural Resources - Environmental Management Bureau (DENR-EMB)
Project inputs:	
GEF	US\$ 4,108,500
UNIDO inputs	US\$ 650,000 (in-kind)
Counterpart inputs	
- Government of the Republic of the Philippines	US\$ 500,000 (in-kind)
Other donors:	
- Operating entity	US\$ 3,900,000 (in-kind / in cash)
- Private sector	US\$ 2,512,380 (in cash)
- NGOs	US\$ 100,000 (in kind)
Grand total:	US\$ 11,770,880
Support costs:	<i>US\$ 382,000</i>

BRIEF DESCRIPTION

In May 2004, the GEF Council approved the Project Brief for the Republic of the Philippines. The objective of the Global Programme, in line with the strategic priorities of the GEF Business Plan FY04-06, is to demonstrate the viability and removal of barriers that impede adoption and successful implementation of available non-combustion technologies for use in the destruction of obsolete Persistent Organic Pollutants (POPs) stockpiles and wastes, more specifically PCBs wastes in developing countries and countries with economies in transition. This specific Project in the Philippines, part of the Global Programme, will introduce and apply such a technology to destroy significant obsolete PCBs wastes and will help remove barriers to the further adoption and effective implementation of a selected non-combustion technology and meet the Stockholm Convention requirements to ensure the use of best available techniques (BAT) and best environmental practices (BEP). The National Implementation Plan (NIP) of the Stockholm Convention in the Philippines favours the application of non-combustion technologies to destroy POPs. The Project will make available all technical, economic and financial parameters of the selected technology in a comparative, open and transparent way that would facilitate and provide further incentive to the global diffusion of innovative alternative non-combustion technologies.

The Project will last four years (48 months). The first twenty-four months will be committed to parallel activities of tendering process, obtaining necessary operating permits, including conducting necessary environmental impact assessment, designing, constructing and testing of the selected non-combustion technology to be deployed, and generally planning and organizing, among other things, such activities as a comprehensive public participation and involvement programme, and a comprehensive, participatory monitoring and evaluation programme.

The second twenty-four months of Project time will cover the demonstration phase that is the destruction of 1,500 tonnes of PCB containing equipment and wastes as the first part of the 6,879 tonnes actually identified during the initial inventory process. Also included during this twenty-four months operational phase would be the continued implementation of the broadly based public participation and involvement programme, and the monitoring and evaluation programme

Approved:

Signature	Date	Name and title
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On behalf of:

**Government of the
Republic of the
Philippines**

UNIDO

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List of Acronyms and Abbreviations

APR	Annual Project Report
APS	Air pollution control system
ASP	Africa Stockpiles Programme
BAT	Best Available Techniques
BCD	Base Catalyzed Dechlorination
BEP	Best Environmental Practice
CAA	Cleaner Air Act
CCO	Chemicals Control Order
CBO	Community Based Organization
CEE	Central and Eastern Europe
CoP	Conference of the Parties
CSO	Civil Society Organization
CTA	Chief Technical Adviser
DAO	DENR Administrative Order
DE	Destruction Efficiency
DENR-EMB	Department of Environment and Natural Resources-Environmental Management Bureau
DOE	Department of Energy
DRE	Destruction and Removal Efficiency
EA	Enabling Activity
ECA	Environmentally critical areas
ECC	Environmental Compliance Certificate
ECP	Environmentally critical projects
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EHF	Environmental Health Fund
ERA	Environmental Risk Assessment
EU	European Union
FAO	Food and Agricultural Organization
FNPV	Financial Net Present Value
FRR	Financial Rate of Return
GEF	Global Environment Facility
GPCR	Gas Phase Chemical Reduction
GoP	Government of the Republic of the Philippines
IC	Incremental Cost
IEE	Initial Environmental Examination
IFCS	Intergovernmental Forum on Chemical Safety
IFMA	Industrial Forestry Management Agreements
INC	Intergovernmental Negotiating Committee
IOMC	Inter-Organizational Programme for the Sound Management of Chemicals
IPEN	International Pesticides Elimination Network
IPPC	Integrated Pollution Prevention and Control
IRR	Implementation Rules and Regulations
LRTAP	Long Range Transboundary Air Pollution
MoA	Memorandum of Agreement
M&E	Monitoring and Evaluation
MMT	Multisectoral Monitoring Team
MSP	Medium-Sized Project
NCT	Non-combustion Technology
NEDA	National Economic Development Authority
NGO	Non-Governmental Organization
NIMBY	Not in My Backyard
NIP	National Implementation Plan
NPM	National Project Manager
OECD	Organization for Economic Cooperation and Development
OP	Operational Programme
PAC	Programme Advisory Committee
PAGASA	Philippine Atmospheric Geophysical & Astronomical Service Administration
PC	Programme Coordinator
PCB	Polychlorinated Biphenyl

PDF	Project Development Facility
PECC	Programmatic Environmental Compliance Certificate
PEIA	Programmatic Environmental Impact Assessment
PENRO	Provincial Environmental & Natural Resources Officer
PHIVOCS	Philippine Institute of Volcanology & Seismology
PIR	Project Implementation Report
PIWR	Project Inception Workshop Report
POPs	Persistent Organic Pollutants
PNOC-PAFC	Philippine National Oil Company-Philippine Alternative Fuel Corporation
PPG	Project Preparation Grant
PPE	Personal Protection Equipment
PPRR	Principal Project Resident Representative
PSC	Project Steering Committee
PSP	Private Sector Partner
PTS	Persistent Toxic Substances
RA	Republic Act
SBAA	Standard Basic Assistance Agreement
SC	Stockholm Convention
SEA	Strategic Environmental Assessment
SSE	Soil/Sediment Extraction Technology
STAP	Scientific and Technical Advisory Panel
TAG	Technical Advisory Group
TOR	Terms of Reference
TPR	Tri-Partite Review
TRBP	Thermal Reduction Batch Processor
UNDP	United Nations Development Program
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization
VAT	Value Added Tax
WB-IFC	The World Bank – International Finance Corporation
WHO	World Health Organization

SECTION A. CONTEXT

A.1 Context and Global Significance

1. At present, most countries with developing economies and economies in transition lack adequate and appropriate technical capacity to destroy in an environmentally sound manner obsolete stockpiles and wastes of Persistent Organic Pollutants (POPs) and/or to remediate POPs-contaminated environmental reservoirs. In addition, in many countries, there are strong disagreements within civil society in the evaluation of technologies that have been proposed for use in the destruction of POPs stockpiles and wastes and/or in the remediation of POPs-contaminated environmental reservoirs. Because of these disagreements, efforts to acquire the technical capacity to destroy obsolete stockpiles and wastes of POPs and/or to remediate POPs-contaminated environmental reservoirs have encountered strong resistance from influential sectors of civil society and this has often impeded or blocked progress.
2. Innovative, highly effective technologies for the environmentally sound disposal (destruction and/or decontamination) of POPs, that do not utilize combustion processes, have recently emerged and commercialized. Some of them have operating characteristics that make them far superior to incineration, as they possess much higher destruction efficiency (DE) and operate in an essentially closed system and hence providing greater occupational health safety. They appear to be capable of performing in ways that avoid problems that have been associated with the expert and public opposition to incineration and other combustion technologies. With the application of these innovative technologies, POPs that are present in different matrices in obsolete chemical stockpiles and wastes as well as in contaminated sites can be disposed in an environmentally sound manner while can also be combined with other clean-up technologies to destroy POPs trapped in soils and sediments.
3. The controversy about combustion technologies revolves around differing estimates of the actual destruction efficiency (not just destruction and removal efficiency) that will be performed during actual operations and the concern that highly toxic residues (gaseous, liquid and/or solid) will be released to the environment during operations.
4. Total destruction efficiency¹ (DE) is almost never reported or calculated for incinerators, cement kilns and other combustion technologies because these devices typically fail to achieve high total destruction efficiencies. Rather, most regulatory agencies only require a measure of the so-called "*destruction and removal efficiency*" (DRE). This measure only takes into account contaminants that are present in the stack gases (air emissions), but ignores toxic contaminants of concern released as solid and liquid residues (as waste ash, sludge and waste water). Modern incinerators achieve high reported DREs by using filters, scrubbers and other stack gas cleaning devices to capture pollutants of concern, remove them from the device's gaseous emissions, and transfer them to solid waste and/or liquid waste residues. As a result, when only a device's DRE is considered, and when a measure of its total DE is avoided, it encourages the selection and deployment of technologies that transfer contaminants from stack gases into other media (effluents and solid wastes). The use of DE as a measure, on the other hand, encourages the selection and deployment of technologies that efficiently destroy and eliminate POPs and other organic pollutants to be otherwise, intentionally or unintentionally, released into the environmental media.
5. The Project will build on the significant level of Civil Society involvement in the Philippines that has begun during the project preparation and also on the Australian experience where public policy is to avoid the use of incinerators for the destruction of hazardous wastes and to involve Civil Society in the approval and the operational oversight of selected destruction technologies has been a common practice. As a result of the Australian experience, groups within Australian

¹ DE is defined as the total mass of a chemical into a process, minus the mass of the chemical in all products, by-products and environmental releases, divided by the input mass (to give a percentage). It differs significantly from the other common measure, destruction and removal efficiency (DRE), which only takes into account stack emissions, with no regard for other releases and residues. Only closed processes that achieve greater than 99.9999 percent DE and inherently safe shall be considered in this demonstration project.

Civil Society that had vigorously opposed incineration and/or land burial of PTS-containing wastes participated in the decisions to utilize these newer technologies, participated in reviews of these technologies, and generally accepted them. The Australian experience resulted in a remarkable level of Civil Society agreement (Government, industry, international, national and community-based NGOs) on the successful deployment of a non-combustion approach to the destruction of Australia's PCB-containing equipment and wastes, and can be viewed as a model "barriers reduction" effort. Early indications from this Project show similar promise for achieving strong Civil Society support to the Project in the Philippines. As the first steps in this direction, DENR is not issuing export permits for PCBs while their incineration is also banned in the Philippines (Clean Air Act, 1999).

6. Full Civil Society involvement has been practiced during the preparatory phases, and will continue to characterize the work carried out at the Programme and Project levels. It has been considered as a unique Programme and Project characteristic that is crucial to project success and will be consistently emphasized and fully documented. As further support in this direction and as an example of GEF's programmatic approach, the GEF-funded global MSP project approved in 2003 on "Fostering active and effective Civil Society participation in the preparations for implementation of the Stockholm Convention", implemented by UNEP and executed by UNIDO is, among others, also addressing national application of BAT to eliminate sources of unintentional POPs and national approaches for identifying and controlling PCBs in use and in wastes.
7. The project will make possible the implementation of specific elements of the Stockholm Convention (described briefly below). The current project will demonstrate and remove barriers to the deployment of alternative, non-combustion POPs destruction technologies that can prevent the formation and release to all media of POPs listed in Annex C of the Convention. More specifically, it will meet the Stockholm Convention call, as noted in Article 5, paragraph C that each Party shall, at a minimum:

"Promote the development and where it deems appropriate, require the use of substitute or modified materials, products, and processes to prevent the formation and release of chemicals listed in Annex C, taking into consideration the general guidance on prevention and release reduction measures given in Annex C and the guidelines to be adopted by decision of the Conference of the Parties."
8. The Programme and Project also have specific relevance to Part II, Annex A of the Convention. Section (e) of Part II states that Parties *"make determined efforts designated to lead to environmentally sound waste management of liquids containing polychlorinated biphenyls and equipment contaminated with polychlorinated biphenyls ..."*.
9. Further, this Project will be consistent with Annex C, which states:

"When considering proposals to construct new facilities or significantly modify existing facilities using processes that release chemicals listed in Annex C, priority consideration should be given to alternative processes, techniques or practices that have similar usefulness but which avoid the formation and release of such chemicals."

A.2 Institutional, Sectoral and Policy Context

10. On 22 May 2001 the Stockholm Convention on POPs was adopted. The GEF became, *"on an interim basis, the principal entity entrusted with the operations of the financial mechanism referred to in Article 13 of the Convention"*. Based on the above the 2nd GEF Assembly held in Beijing, China in 2002 agreed on the creation of a new focal area on POPs and subsequently the 22nd meeting of the GEF Council started to review and comment on the new GEF POPs Operational Programme on POPs (#OP 14) (GEF/C.22/Inf.4). The proposed project would serve as a barriers reduction exercise that could help inform future activities mandated or encouraged under the provisions of the Convention that entered into force on 17 May 2004.
11. Article 6 of the Stockholm Convention addresses the identification and management of POPs stockpiles and wastes. It requires such stockpiles and wastes to be *"managed in a manner*

protective of human health and the environment.” Parties must “develop appropriate strategies for identifying” stockpiles, products and articles in use, and wastes covered by the treaty, after which they must manage the stockpiles in a “safe, efficient, and environmentally sound manner.” The Convention requires that disposal of such wastes be done in such a way that the POP content is “destroyed or irreversibly transformed” so it is no longer a POP, or “otherwise disposed of in an environmentally sound manner when destruction or irreversible transformation does not represent the environmentally preferable option or the persistent organic pollutant content is low.”

12. When POPs stockpiles are incinerated or otherwise combusted, unintentional products listed in Annex C are generated as combustion products, or generated in the stack, following combustion (as the stack gasses cool down). Hence non-combustion alternative destruction technologies that avoid unintentional production are consistent with the language of the Convention.
13. The Philippines is one of the countries with serious interest to adequately address POPs problems with strong public involvement. Lack of adequate alternatives for the destruction of POPs (mainly PCBs equipment and wastes) has resulted in export of POPs wastes at very high cost, which is currently the only option in the country for proper management of PCBs wastes by the owners. Export prices are frequently more than US\$10 per kg of PCBs waste, with an average of well over US\$5 per kg. Therefore, it is understandable that only very dedicated and financially strong companies can pay such disposal costs. Successful demonstration and transfer of a non-combustion technology will significantly contribute to achieving these goals by the virtual elimination of all PCBs stockpiles and materials containing PCBs in the Philippines. The Government of the Philippines, recognizing the hazards of inadequate PCBs management in the country, issued in 2004 the Philippine Chemical Control Order (CCO) for Polychlorinated Biphenyls (see Annex 6), which require registration, labeling, safe handling and final ban and phase-out of use or storage of PCBs within 10 years after the effective date of the Order. It should be noted that DENR has not issued export permits for PCBs since 2004 as a support to the project. The Project will assist the Philippines in operating the CCO through ensuring safe handling and environmentally sound storage and destruction of PCBs.
14. The Environmental Impact Assessment (EIA) will have a crucial role for the project implementation and the EIA process needs to be considered at two levels:
 - The *national level*, consistent with the continuing effort of DENR strengthen the implementation of the Environmental Impact Statement (EIS) System following provision of DENR Administrative Order No.37, series of 1996, where generally accepted principles of national environmental impact analysis apply; and
 - The broader, *international level*, an important project consideration as the Project is a demonstration Project aimed eventually at being replicated amongst as many Stockholm signatory countries as is possible.
15. The Project is based on the assumption that the destruction technology to be deployed in the Philippines is one whose operating system is essentially closed, and does not rely on a combustion procedure to destroy the targeted wastes. The technical performance of the selected technology will have to be carefully monitored during the entire period of the Project implementation. The monitoring will be based on broad civil society participation at national level by providing requisite level of public involvement in the monitoring of technology efficiency and safety during the life of the Project.
16. Based on extensive consultation with NGOs that have expertise in this field, and on experience in this project to date, it is expected that destruction technologies will most easily win broad acceptance within civil society if, at a minimum, they can demonstrate two important characteristics:
 - They operate in systems that are essentially closed. This means that uncontrolled releases of POPs and other substances of concern can be avoided and all residues from the destruction process (gaseous, solid and/or liquid) can be contained, analysed and, if necessary, further processed prior to release. It also means that the technology can avoid the periodic “upsets” that plague incinerators and other open destruction process; and

- They can achieve total destruction efficiencies (DEs) for POPs and other substances of concern that approach 100%. This means that they not only effectively eliminate gaseous, air-emissions of POPs and other toxic pollutants of concern but they also effectively eliminate releases of these pollutants as solid wastes and as liquid wastes. (This approach conforms to the terms of the Stockholm Convention where the obligation is to reduce “*total releases*” to all media with the goal of “*their continuing minimization and where feasible ultimate elimination*”).
17. These two characteristics have been the starting point for stakeholder participants during preparation and will continue to underlie Civil Society involvement during Full Project Implementation. For purposes of EIA consideration, the second characteristic mentioned above has particular importance. It is an assumption of the project that destruction of POPs matrices undertaken during Project implementation will approach 100%. But it is not enough to operate theoretically, there must be an effective and funded means to verify that the destruction efficiency being sought by the Project will actually be achieved. For this reason, the Project has been designed to involve both national and international resources to monitor technology performance with particular reference to national EIA release standards and to the objectives of the Project.

A.3 Stakeholder Analysis and Involvement Plan

18. Stakeholder participation has been a unique and successful feature during Project Preparation, and will continue to be a major feature of the Full Project. The Project will stress participation within the Philippines, and will also sponsor regional workshops to disseminate project information and results of the destruction activity in the country.
19. The initial PDF-B called for the establishment of a consultative process among government officials and relevant stakeholders to develop planning process guidelines and secure commitment by government agencies, business groups, and other affected stakeholders to select, deploy, and monitor POPs destruction technologies. This initial process has resulted in multiple consultations in the Philippines regarding the eventual deployment of the most effective and appropriate non-combustion technology to address the targeted stockpile. Five consultations involving a broad array of stakeholders have been undertaken in the Philippines, and the development of process guidelines is now well underway.
20. The Government of the Philippines through the Department of Environment and Natural Resources (DENR) has the overall responsibility for environmental management including regulatory, monitoring, permitting and licensing functions on all matters related to protection and conservation of the environment. The DENR also serves as the GEF operational focal point as well as the POPs focal point. The Environmental Management Bureau (EMB) of the DENR implements regulations on EIA, toxic and hazardous wastes management and air quality management. As such, the DENR-EMB will have the lead responsibilities in coordinating all other institutions in the Philippines participating in the project. DENR will contribute US\$ 0.5 million in-kind as co-financing to the project (see Annex 13). This co-finance includes, among other things, in-kind contribution for project support and coordination, environmental impact assessment (EIA), certification of the operation of the destruction unit, site location and preparation, monitoring and evaluation, and development of the public/private sector partnership.
21. The Project anticipated that ease or difficulty in successfully deploying alternative technologies that meet Project criteria would depend, to some considerable degree, on a country’s pre-existing technological infrastructure and on related considerations of human resource availability. This new understanding more specifically emphasized the realization that for purposes of cost and operating efficiency, it was not only desirable but also essential to locate the non-combustion technology with an existing chemical or petrochemical plant, where there already exists the kind of management structure, workforce, and access to raw materials needed to operate the technologies. After undertaking a process in identifying and reviewing several potential options for operating entity, DENR selected the Philippines Alternative Fuel Corporation (PAFC), formerly Petrochemical Development Corporation of the Philippine National Oil Company (PNOC-PDC), who committed to provide a co-financing of US\$ 3.9

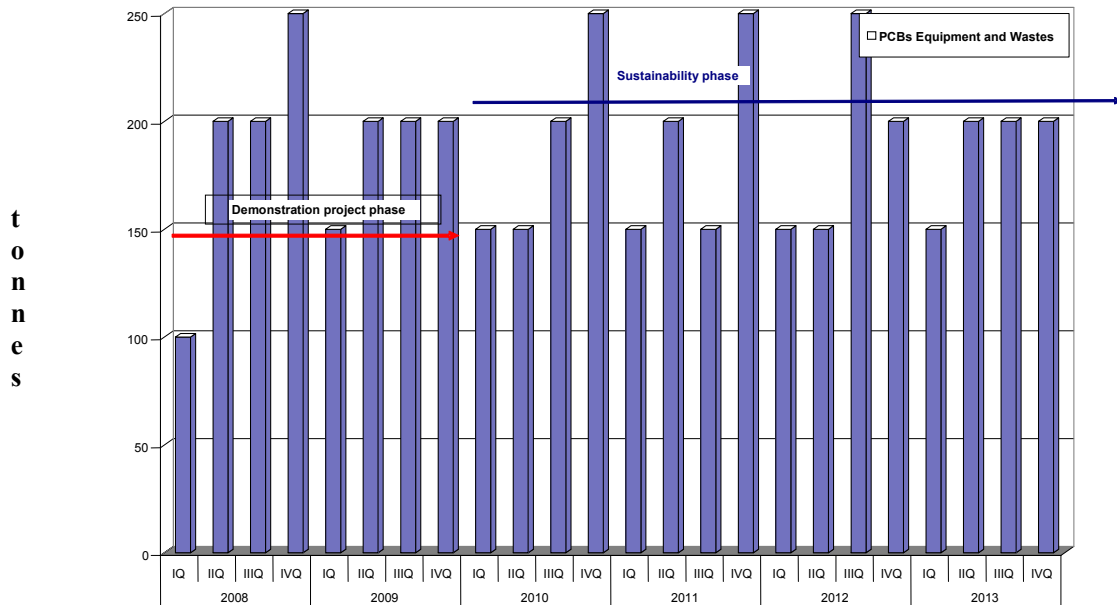
million, to host and operate the POPs destruction facility to be located at the PPDC Petrochem Park in Mariveles, Bataan. The company will be responsible for all of the activities concerning site preparation, installation of the Non-combustion Unit and destruction activities in their site as well as control and compliance with the license or permits issued by the national and local authorities. PAFC has set aside approximately 4,000 square meters in its Petrochem Park for the POPs destruction facility. The facility itself has a capacity to destroy around 300 tonnes of POPs per year. It is likewise the intention of the project to put up an interim storage facility within the site for about 300 tonnes of PCB at any one time. PAFC will evaluate the feasibility of accepting up to a maximum of 600 tonnes for storage.

22. Other partners (licensed service providers) will be responsible for continuous and adequate supply of PCB to the operations through collection, transport and storage of PCB waste and PCB-containing equipment from all over the Philippines. The owners of the PCB wastes and PCB-containing equipment (most importantly Meralco, a private and TransCo, and NAPOCOR, public sector entities) will ultimately pay for the services. The estimated services charges to be paid by them would be about US\$ 2.5 million (see Annex 13).
23. The proposed Project will build on significant level of Civil Society involvement that has started during the preparation activities. The local representatives together with the private sector partners will create a strong public-private partnership supported by the local Civil Society (NGO community) who is represented by the EHF at international level. An example of NGO participation in project activities is that of the Greenpeace Philippines, a local NGO that has been involved in project discussions. There will be substantial and ongoing country-based Civil Society participation in the Philippines, including arrangements to include elements of Civil Society in project monitoring and evaluation of results. The project makes explicit provision for continuing regional Civil Society involvement in both the work of the Project and the overall Programme. Furthermore, the Project includes provision for the sponsorship of two regional workshops for African, Asian and Latin American participants, with specific reference to LDCs to disseminate information/results on Non-combustion technologies and destruction activities to date and project lesson learned. Lastly, specific provision will be made for site visits to the demonstration site in the Philippines by elements of Civil Society, including representatives of countries of the region and in other global regions, on an ongoing basis. This will not only strengthen the Civil Society participation portion of the Programme and Project but also seen as beneficial to enhancing replicability and sustainability at regional and global levels. The organigram and the implementation arrangements give further details on the inter-relationship of the stakeholders as well as of the GEF implementing and executing agencies (see Part III - Management Arrangements).

A.4 Baseline Analysis

24. The Republic of the Philippines, as most other countries that are parties to the Stockholm Convention and eligible for GEF financing, does not have adequate facilities for the destruction of PCB wastes. The recent practice, to the extent PCB product has been addressed at all, has been to export PCB wastes for incineration. Such an arrangement is very costly on the Philippine market (US\$ 5 to US\$ 10 per kg) so only large solid companies can do proper identification, collection and export of PCB wastes.
25. Without the project, Philippines will most probably continue with the practice of exporting PCB wastes for destruction. The currently known PCB inventories reported in the NIP of the Stockholm Convention dated January 2006 include 6,879 tonnes of PCB equipment and wastes comprising about 2,400 tonnes of PCBs oil. The PCBs inventory in the Philippines has been changed during the preparatory phases of the subject project. It is a reasonable fact that can be experienced in any other country during the preparation of their inventories. An increasing PCBs inventory has also been experienced in Slovakia. The original concept was that the demonstration project should destroy at least 1,000 tonnes of PCB-contaminated oil from transformers. However, based on the early experiences gained in Slovakia, financial sustainability of the operations in the demonstration project can only be achieved if the total existing PCBs-containing equipment and wastes would be eliminated. In light of this, the total tonnage to be destroyed during the demonstration phase is 1,500 tonnes of PCB-containing

equipment. The baseline scenario is clarified to include some 800 tonnes of PCBs equipment in the four-year demonstration phase as an average of 200 tonnes are exported each year.



Graph No. 1: Projected destruction of the stockpile in the Philippines

26. Based on the identified stockpile to date, the destruction facility will be utilized at full capacity of 750 tonnes annually until 2014, which is the date given in the CCO for disposal of all PCBs-containing equipment and wastes in the Philippines (see Graph No. 1 above). The sustainability of the Project is ensured by the fact that PNOC-PAFC, in partnership with the Government, will be assuring a flow of PCBs-containing equipment and wastes to the destruction unit over the period. The MoA between DENR and the main owners of PCB transformers and capacitors has been prepared and agreed between the partners, ready to be signed once the project is approved and respective activities will start. Details of costs to be charged to the waste suppliers will be established in comparison to the market price in the Philippines for exporting PCBs-containing equipment and wastes to Europe. The recent average cost paid by the waste owners for incineration in Europe is generally between US\$ 5 to US\$ 10 per kg of PCB equipment. To ensure sustainability, the destruction cost per tonne for various alternative technologies will be compared with a view to selecting the technology which is most cost effective while meeting all other technology selection criteria as defined by the TAG and recommended by the STAP/GEF workshop. This cost must also be lower than the cost of export for incineration to ensure that the waste owners will continue to utilize the facility. It is important to mention that, once destruction technology is installed in the country, the Government of the Philippines is intended to ban PCBs wastes and PCBs contaminated equipment for export. Based on legislation in force today, export has to be approved by DENR. However, no single export permit of PCBs wastes has been authorized since 2004, while there has been a ban on PCBs incineration since the Implementation Rules and Regulations (IRR) of the Clean Air Act (CAA) in 2000.
27. Beyond the planned period of operation, the operating entity will be looking to utilize the plant for continued PCBs and other POPs disposal and the destruction of non-metallic toxic substances by ownership transfer of the capital equipment, based on MoA signed with the DENR. Ownership transfer will take place at the end of the project duration, so that the fair market value can be determined. At present there is a prohibition of the import of POPs into the Philippines. However, efforts, underway in the inventory process of preparing the NIP, have already been able to identify substantial amount of PCBs-containing equipment and wastes. It is expected that the POPs-containing equipment and wastes will continue to grow. In short, all

- evidence points to the long-term financial sustainability of this Project on condition that the costs charged to the waste owners remains competitive.
28. In summary, the project will put in place a technology with the capacity to destroy hundreds of tonnes of PCBs and other POPs contaminated product. After the destruction of 1,500 tonnes covered by the project demonstration phase, data and information obtained would make it possible to correctly estimate the destruction costs and consequently the cost-effectiveness if the entire inventory of PCBs-containing equipment and wastes are destroyed. The implication is that there shall be guarantees that transparent M&E goes on at least by 2014. In addition, the potential of diffusing the technology in the region provides an additional positive element to the cost-effectiveness of the project and lowering the risk of GEF grant financing.
 29. The GEF support will create a unique situation for destruction of PCB wastes in the country in an environmentally sound manner, using best available technology thus avoiding secondary contamination problems with unintentional POPs contaminants.
 30. The total cost of the Project is US\$ 11,770,880. The GEF contribution to the portion of the Programme and the Philippine Project that is the subject of this proposal is US\$ 4,108,500. The total (substitutional) baseline is US\$ 4,000,000 that represents continuation of the recent status quo whereby an average of 200 tonnes of PCB equipment is exported every year. Over the 4-year period of the project, about 800 tonnes would be exported in the absence of the project. At the current average cost of US\$ 5,000 per tonne of exporting PCB equipment for incineration in Europe, it amounts to a total of US\$ 4,000,000 in 4 years. The Project co-finance amounts to US\$ 7,662,380. Of this amount US\$ 3,900,000 is cash and in-kind contribution from the operating revenue of the destruction unit generated by PNOC-PAFC and US\$ 2,512,380 will come as in-cash contribution from the main private owners of PCBs, which contribution would be guaranteed by the Government. Further in-kind contributions will come from the Government of the Republic of the Philippines (US\$ 500,000), NGO community (US\$ 100,000) and UNIDO (US\$ 650,000). [It should be noted that the NIP for the Stockholm Convention (Chapter 3, page 14) estimated the investment from the private sector on non-combustion PCBs destruction unit at US\$ 7 million, in other words further co-financing contributions might be foreseen during the project life.] A summary Incremental Cost Table appears below. The full Incremental Cost Table can be found in Annex 1 of this project proposal.

Table 1: Summary Incremental Cost Table (in US\$)

Component	Baseline	Alternative	GEF	Co-finance
Selection of Technology and Purchase through contractual agreements	0	655,800	355,800	300,000
Site Preparation and Environmental Compliance	0	4,805,880	253,500	4,552,380
Purchase and Installation of Equipment for PCBs disposal	4,000,000	4,733,000	2,423,000	2,310,000
Destruction facility in operation, PCBs destruction, Monitoring and evaluation and public involvement	0	671,000	501,000	170,000
Lessons learning, dissemination and adaptive management system in place		905,200	575,200	330,000
Total	4,000,000	11,770,880	4,108,500	7,662,380

31. While Equipment Costs is estimated to be US\$ 2,423,000, there is a recognition, that the international tender may result in a bid that is less than this assumed amount, the difference would be returned to GEF.

A.5 LOGICAL FRAMEWORK ANALYSIS

Logical Framework and Objectively Verifiable Impact Indicators

Project Strategy	Objectively verifiable indicators				
Goal	<p>The overall goal is to demonstrate the viability and to replicate, at the global level, available non-combustion technologies for use in the destruction of obsolete POPs, specifically PCB wastes, PCB-containing equipment and the clean-up of POPs, and specifically PCBs in different matrices including contaminated soils or sediments.</p>				
	Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
<p>OUTCOME 1: Selection of Technology and Purchase through Contractual agreements</p>	<ul style="list-style-type: none"> - Proven, non-combustion technologies identified, deployed and shown to perform in a technologically superior way in comparison with the combustion technologies and at competitive cost. - Barriers have been explicitly identified and evidence demonstrated that they have been effectively removed. - Successful communication with GEF and other related programmes, conventions and other relevant mechanisms verified. - Establishment of the Programme Advisory Committee, the Project Steering Committee and the Technical Advisory Group. 	<ul style="list-style-type: none"> - Current situation is reflecting the absence of the ESM solutions in the country. Only solution available at present is overseas export for combustion, however, the government has not approved any export license in 2004 and 2005. 	<ul style="list-style-type: none"> - The Project and Programme coordination and management established. - Proper selection of the non-combustion technology reflecting type of stockpile and specific country needs. 	<ul style="list-style-type: none"> - PMC documents generally - PAC meeting agendas and minutes - PSC and TAG meeting agendas and minutes - Terms of Reference of contractual arrangements with technology holders/vendors - Work plan - Business plan - Technical reviews - Monitoring and Evaluation Plans 	<ul style="list-style-type: none"> - Country, Civil Society, and Private Sector commitment to deployment of non-combustion technologies. - Barriers identified in the Programme and Project are capable of being successfully addressed. - Single country successes are able to translate into more regional and global applications. - There is the emergence, in a growing number of countries and globally of an effective regime for the use and promotion of BAT and BEP. The Executing Agency will move quickly to hire the Programme Coordinator, the NPM and other requisite staff. - Delay in these recruitments will have a cascading effect on formulation of work plans.

Project Strategy	Objectively verifiable indicators				
	Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
OUTCOME 2: Site Preparation and Environmental Compliance Certificate issued	<ul style="list-style-type: none"> - Site selection approved. - Investments successfully done, site ready for technology installation. - Environmental compliance activities, EIA, licensing - EIA and license issued for the purpose of non-combustion unit and installation and activities related to PCBs and PCBs equipment destruction 		<ul style="list-style-type: none"> - Final site selection, development of needed facilities and infrastructure based on approved EIA and environmental compliance process. 	<ul style="list-style-type: none"> - Site preparation plans and needs, as well as description of site preparation activities maintained by NPM. - Terms of Reference for EIA and environmental compliance. - Approved work plan for the EIA and documentation of the process leading to satisfaction of the Government requirements. - Environmental reviews - Monitoring and Evaluation plans - License issued 	<ul style="list-style-type: none"> - Necessary contracts have been successfully negotiated and signed. - EIA fully satisfies Government requirements. - Infrastructure in place
OUTCOME 3: Purchase and Installation of Equipment for PCBs disposal	<ul style="list-style-type: none"> - Certification by the vendor and Project Management Supervisory personnel that training has been successfully undertaken and that a trained managerial and labour force is prepared to run the Unit. 		<ul style="list-style-type: none"> - Successful purchase of the equipment, import to the country and installation. 	<ul style="list-style-type: none"> - Written report by Project Management Supervisory personnel documenting the process of design, construction, testing, deployment and successful operation of the Destruction Unit. 	<ul style="list-style-type: none"> - The selected technology operates according to design specifications. - The elements of sustainability described in the Sustainability section of this Project Document have been fully met.

Project Strategy	Objectively verifiable indicators				
	Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
	<ul style="list-style-type: none"> - Vendor approval of the Project Management Supervisory personnel verification of successful site preparation consistent with operating needs. - Documented evidence that the necessary raw materials are or will be made available to the project. - Documentation of the capital transfer arrangements. 			<ul style="list-style-type: none"> - Monitoring quality and quantity of releases (emissions and residues) of the reaction process. - Existence of training manuals and records of training sessions. - Pilot records of the operation under satisfactory conditions approved and signed. - Records of management and labour hours worked, raw materials used and results achieved. - Agreements leading to the final transfer of the Capital Equipment and records of discussions and decisions leading to those agreements, kept in the offices of the NPM and UNIDO 	<ul style="list-style-type: none"> - High quality training manuals including the required theoretical and practical information to make the users able to raise awareness and diffuse technologies. - Accurate accounting system to be kept for recording operating expenses.
OUTCOME 4: Equipment operation, PCBs destruction, Monitoring and Evaluation and Public Involvement	<ul style="list-style-type: none"> - Destruction Unit fully operational. - Destruction of PCBs ongoing as designed. - Monitoring and evaluation protocols approved and operational. 		<ul style="list-style-type: none"> - Successful full operation of the Non-combustion Unit with compliance with technical and environmental standards. 	<ul style="list-style-type: none"> - Texts of M&E protocols and an Evaluation Framework on file. - Records of M&E activities undertaken, people involved and results defined and made available upon request. 	<ul style="list-style-type: none"> - As barriers are reduced or eliminated, new technologies will be developed and enter the market place to compete with both traditional combustion alternatives and the relatively limited number of alternative technologies currently available.

Project Strategy	Objectively verifiable indicators				
	Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
	<ul style="list-style-type: none"> - Monitoring and evaluation timetable established and approved. 		<ul style="list-style-type: none"> - Environmentally sound destruction of 1,500 tonnes of targeted PCBs-containing equipment and wastes. 	<ul style="list-style-type: none"> - Plans for and records of Civil Society participation in Programme and Project activities developed, distributed and maintained in the offices of NPM and UNIDO. 	
<p>OUTCOME 5: Lesson learning, Dissemination and Adaptive Management System in place</p>	<ul style="list-style-type: none"> - Civil Society groups at local, national and regional established. Plans described for the additional regional workshops. - Technical Advisory Group (TAG) Terms of Reference contains clear responsibility and guidelines to continue technology evaluation. - Working committees comprised of Project Supervisory personnel, operating entity officials and others as necessary to write Operational manuals. - Clear deadlines and responsibilities developed to ensure development. 		<ul style="list-style-type: none"> - Reports prepared by Civil Society groups on project implementation progress and their participation in project M&E. - Dissemination of information gathered through project activities (meetings) as scheduled in the Work plan. - Clear deadlines and responsibilities to ensure timeliness and accuracy of M&E reporting. 	<ul style="list-style-type: none"> - Minutes of the TAG meeting and other relevant reports compiled, distributed and maintained in the offices of the NPM and UNIDO. - Copies of all other relevant Programme and Project Reports distributed and maintained in the offices of the NPM and UNIDO. - Materials developed for and maintained in the Project Website available publicly through the website. - Documented increased level of governmental participation in regional fora. 	<ul style="list-style-type: none"> - IAs, other members of the various committees and cross project country representatives will see it in their best interests to participate in inter-project coordination and co-operative activities. - A key assumption is that once the promise of the deployment of these new technologies is realized in the first Project country (Slovakia), it will be possible to generate enthusiasms among donors to sustain and build upon the momentum that has been created through the first demonstration project.

Project Strategy	Objectively verifiable indicators				
	Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
	<ul style="list-style-type: none"> - Production and distribution of Programme and Project Reports. - Regional initiatives developed and implemented. - Civil Society initiatives developed and clear execution modalities defined. - Donor approaches planned and executed. - Systematic procedure established to use the GEF Programme to leverage other donors for direct and indirect support to Programme activities. - Increased donor support for direct and indirect assistance to Programme related activities. 			<ul style="list-style-type: none"> - Increased extent to which explicit cross project and programme linkages are created and joint activities and cooperative arrangements documented. - Written records and reports of inter-project communications. - Workshops and cross-project filed trips. - Relevant agendas and minutes of the PAC and PSC. 	

SECTION B. REASONS FOR UNIDO ASSISTANCE

32. Under the Multilateral Environmental Agreements, UNIDO has been one of the leading agencies in implementing projects under the Montreal Protocol and is an Executing Agency with Expanded Opportunities in Stockholm Convention on POPs.
33. UNIDO as a GEF Executing Agency with Expanded Opportunities has been designated as one of the GEF IAs/ExAs with comparative advantages in industrial aspects of the Stockholm Convention on POPs. UNIDO as the United Nations specialized agency for environmentally sustainable industrial development has the plethora of experience gained in four decades in all aspects of industrial development in developing countries and countries with economies in transition including technology dissemination and technology transfer. In this aspect the most notable is the UNIDO Cleaner Production Centers program that has recently significantly contributed to the Strategic Approach of International Chemical Management (SAICM). UNIDO has also been participated in the work of the International Expert Group of Best Available Techniques and Best Environmental Practices (BAT/BEP) including UNEP regional seminars on the BAT/BEP guidelines and guidance in the Asia and the Pacific.
34. UNIDO has been engaged at the very early stage of the Stockholm Convention in dissemination and transfer of non-combustion technologies as alternative technologies of BAT/ BEP nature. The first project of this type is being implemented in Slovakia and it is at the stage of international competitive bidding. To be able to evaluate and review non-combustion technologies UNIDO has been accumulated considerable amount of knowledge and expertise. In addition UNIDO staff and experts have also visited most of the facilities worldwide that are operating non-combustion technologies for final disposal of POPs and in such a way have gathered personal insight to these technologies.

SECTION C. THE PROJECT

C.1 Project Rationale and Policy Conformity

35. As there will be four country-specific demonstration *Projects*, there will be need for strong coordination of the four project activities for purposes of successful replication and sustainability. This will require recruitment of a part-time Programme Coordinator (PC) who will oversee the non-combustion *Programme* in these four countries. A Programme Advisory Committee (PAC) will be established to oversee the overall Programme.
36. The *Programme* will:
- Ensure continuing development of the Project demonstration activities in the remaining participating countries, including development and finalization of Project Briefs and Documents that will be required for submission to GEF Council.
 - Develop detailed rationale for the Project demonstration activities based on, *inter alia*, different socio-economic conditions, different technologies to be selected, different types of POPs wastes, etc..
 - Serve as the coordinating entity between and among the four demonstration Projects comprising the overall non-combustion Programme.
 - Ensure effective communication between and among the Non-combustion Demonstration Project, and *inter alia*, other Stockholm Convention related projects and activities such as the Africa Stockpiles Programme (ASP), the UNEP-implemented, UNIDO-executed NGO Capacity Building MSP "Fostering active and effective Civil Society participation in the preparations for implementation of the Stockholm Convention", and Enabling Activities in Central and Eastern Europe and globally.
 - Engage WB-IFC and other possible funding agencies and institutions to ensure replication of this Project and enlargement of the Programme.
 - Generally serve as a clearinghouse for information related to non-combustion technologies and the potential for their deployment to destroy obsolete POPs stockpiles and wastes, and potentially address continuing, industrially related streams of POPs contaminants. In this relation the programme will develop a very close coordination and cooperation with UNEP, the Secretariat of Stockholm Convention and the Secretariat of Basel Convention.
37. The Programme will be co-funded by this Project as appropriate and as agreed by the respective Project Steering Committee (PSC).
38. The Philippine Project will:
- Oversee the day-to-day operations of the Project in the country and, overall, be responsible for its effective implementation;
 - Assure effective coordination between and amongst the Implementing and Executing Agencies; the Government of the Republic of the Philippines, the vendor, the private industry, the operating entity responsible for the day-to-day destruction operations of PCB wastes and the Civil Society;
 - Investigate possible partnership with private sector;
 - Assure the requisite level of on and off-site training for all personnel related to the Project;
 - Consider during the project implementation exit strategies for the project, taking into account the final ownership of the equipment and technology, and various possible arrangements between the Government and the private enterprise involved, such as exploring different incentives for further investment, etc.;
 - Ensure that the requisite level of monitoring and evaluation of project is undertaken and properly disseminated; and
 - Serve as the principal and day-to-day link to the Global Programme.

C.2 Objective of the Programme and Project

C.2.1 Overall Objective of the Programme

39. The overall objective of the Programme, in line with the strategic priorities of GEF Business Plan FY04-06, is to demonstrate the viability to promote replication, at global level of available non-combustion technologies for use in the destruction of obsolete POPs, specifically PCB wastes, PCBs-containing equipment and the cleanup of POPs, and specifically PCBs in different matrices including contaminated soils or sediments.

C.2.2 Immediate Objective of the Programme

40. The objective of the Programme is to demonstrate, promote and replicate innovative and cost-effective technologies and practices, and identify potential opportunities for technology transfer, including non-combustion technologies by removal of barriers to the deployment of alternative, innovative non-combustion POPs destruction technologies in several different country settings, in different development regions, recognizing that barriers to deployment will take different forms in differing country, regional and cultural settings.

C.2.3 Immediate Objective of the Project

41. The immediate project objective is to deploy a commercially available, proven non-combustion technology to address 1,500 tonnes of PCBs-containing transformers. The currently known PCB inventories reported in the NIP of the Stockholm Convention dated January 2006 include 6,879 tonnes of PCB equipment and wastes comprising about 2,400 tonnes of PCBs oil. The Government of the Philippines will continue the inventory activities to confirm reported data, and also to develop and operate database of PCBs-containing equipment and wastes, which would cover, among others, PCBs used in electrical equipment, hydraulic systems, cooling systems, etc. The identified inventory as presented in the table below shows the industry categories of PCBs-containing equipment and wastes in the country.

Table 2: Summary of PCBs inventory in the Philippines

Industry category	PCB oil (kg)	Equipment Dry weight (kg)	Total Weight (kg)
Electrical utilities and cooperatives	1,620,310	2,788,040	4,408,350
Commercial buildings	34,723	83,454	118,177
Industrial establishments and manufacturing plants	525,399	1,098,726	1,624,125
Military camps and bases	3,516	8,204	11,720
Servicing facilities	191,397	445,121	636,518
Hospitals	25,215	55,191	80,406
TOTAL	2,400,560	4,478,736	6,879,296

C.3 The UNIDO approach

Project implementation:

42. **UNIDO** will be the Implementing Agency for the Project. UNIDO is well positioned to act as an effective implementer of project activities based on its comparative advantages in this area. At its 1997 Forum II meeting, IFCS "invited the United Nations Industrial Development Organization (UNIDO) to consider carrying out pilot projects". UNIDO directly accessed PDF-B funds consistent with its role as a GEF Executing Agency with Expanded Opportunities in

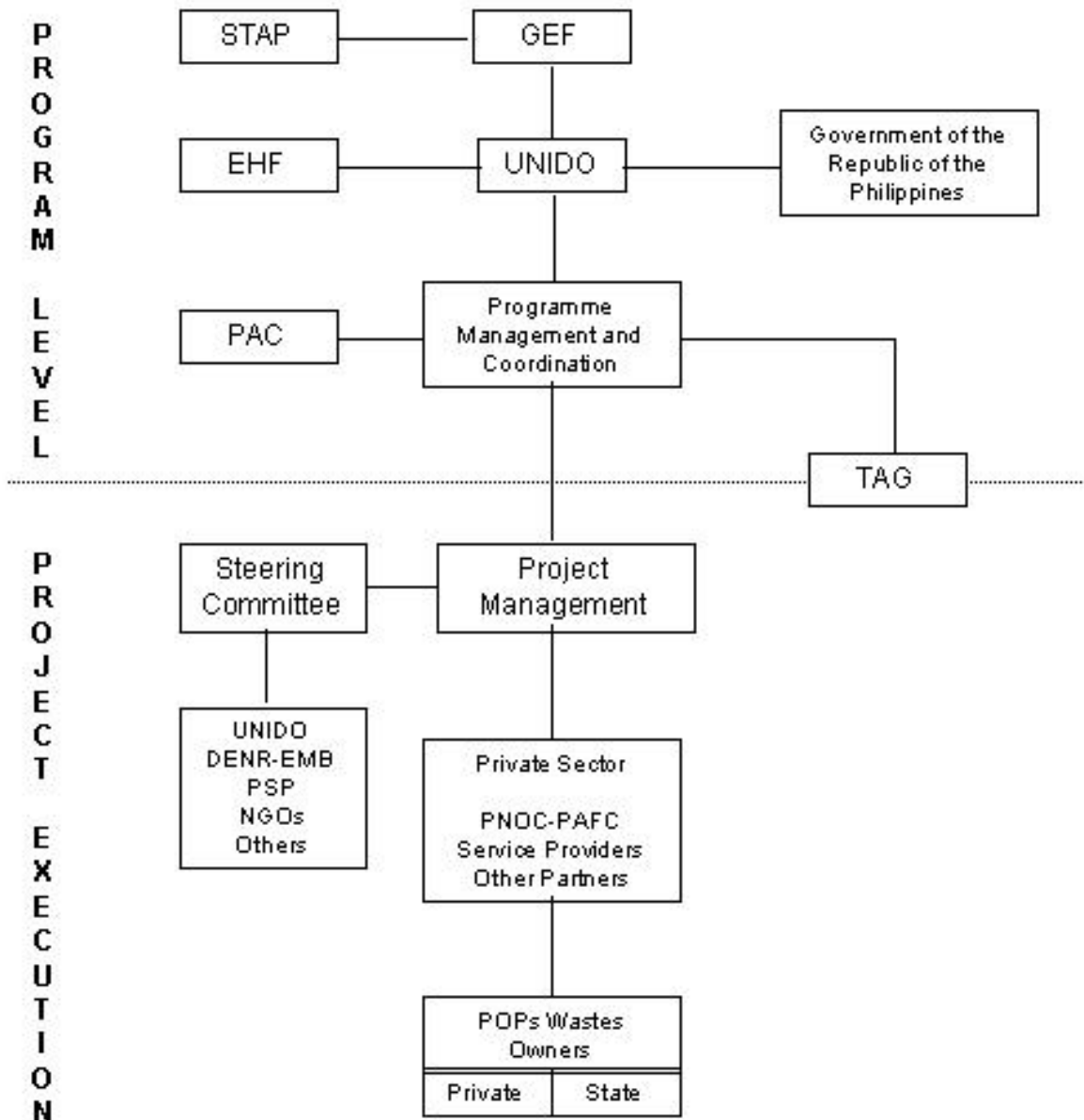
the POPs focal area. UNIDO has accumulated significant knowledge in the pesticide sector as well as in its Cleaner Production Programme. Issues related to the unintentionally generated by-products such as dioxins and furans have also been addressed specifically, more importantly in the Pulp and Paper sector.

43. The Government of the Republic of the Philippines through the **Department of Environment and Natural Resources (DENR)** has the overall responsibility for environmental management including regulatory, monitoring, permitting and licensing functions on all matters related to protection and conservation of the environment. The DENR also serves as the GEF operational focal point as well as the POPs focal point. The **Environmental Management Bureau (EMB)** of the DENR implements regulations on EIA, toxic and hazardous waste management and air quality management. As such, the DENR-EMB will have the lead responsibilities in coordinating all other institutions in the Philippines participating in the project. It is expected that DENR-EMB will nominate the National Project Manager (NPM) and will secure full support to the project execution.
44. The Project delineates clearly the strong level of *Partnership* between the Government of the Republic of the Philippines, the private and public sector entities as well as the Civil Society. Strong evidence of this can be found in all Project Outcomes. The extent and significance of *Private Sector Investment* is further described in the Financial Sustainability segment. During the PDF-B phase, a Memorandum of Agreement (MoA) was signed between DENR and the operating entity and revised on 20 December 2005, which defined the respective role and responsibilities as well as the co-financing contribution of the parties. Letters of co-finance are included in Annex 13.
45. The Project makes generous provisions for strong, continuing Civil Society participation in Project implementation activities and builds upon the strong support for the Programme and the Project that was created during preparation. Evidence of the continuing commitment to strong *Civil Society Participation and Advocacy* in Project activities, an essential ingredient to strengthening community level support and thus sustainability for the objectives of the Programme and Project, can be found throughout the Activities in Outcome 4. Strong linkages to other projects will ensure best efforts to generate replicability of project results in other countries. The Project Brief for the Africa Stockpiles Programme approved in 2002 makes repeated references to the need to take into account results of the Non-combustion Demonstration Programme, thus Programme management will ensure that these linkages will be established and nurtured. Evidence to support the *Financial Sustainability* of the Project will be expanded in the Financial Sustainability section.
46. According to the Project Brief, the selection of operating entity was foreseen by national bidding. However, when DENR made a survey to identify potential cooperating stakeholders as operating entity, it was found that such bidding would not bring tangible results because of lack of capacity to handle such high technology-based activity. Moreover, all interested stakeholders were skeptical about the financial viability of the project due to the low inventory values of PCB-containing equipment and wastes. Pre-feasibility studies have shown that the financial viability of the project could only be achieved with an inventory of 1,500 tonnes of PCB-containing equipment and wastes. To facilitate the project start up, DENR has established the legislative frame for environmentally sound disposal of PCBs (Annex 6). In this respect, the issuance of the "Code of Practice for handlers of PCB wastes" in 2006 has particular importance to the project because DENR has decided to continue reviewing the situation with the stakeholders in order to identify the technically and financially most suitable operating entity. When the latest PCB inventory identified 5,000 tonnes, it has become obvious that the data is not exhaustive and the quantity of PCB-containing equipment and wastes is still growing. So far, only the **Philippine National Oil Company-Philippine Alternative Fuel Corporation** (PNOC-PAFC) has given a positive response to accept the role of the operating entity. It should however be noted that no other stakeholder has shown has shown interest to bid and become the operating entity. Hence, DENR has decided to select PAFC and this decision has been acknowledged by all parties as they felt that the national bidding would not bring a different result to alter the decision. PNOC-PAFC, as operating entity, will be responsible for all of the activities concerning site preparation, installation of the unit and destruction activities in their site, as well as control and compliance

with the license or permits issued by the national and local authorities. Also close cooperation with service providers, which will be responsible for collection and transport of wastes across the country, is required.

47. The **Environmental Health Fund (EHF)** will serve as a Principal Cooperating Agency for specific elements of the Project and the Programme. In this role the EHF will continue to serve as a clearing-house and coordinating mechanism for involvement of the NGO community. The EHF has already contributed substantially to project development during the PDF-B implementation. During Project Preparation, EHF was instrumental in securing broad Civil Society involvement in, and generating support for, the objectives and activities of the proposed Project, and is willing to continue in that role during Full Project implementation. The role of EHF will be the subject of an MoU to be concluded between UNIDO and EHF that will provide details of services that the latter will undertake in support of the Programme and Project.
48. The Programme will receive oversight and policy direction from a **Programme Advisory Committee (PAC)**. The PAC will initially be comprised of ten (10) members. More specifically, members of the PAC will include a representative from the Governments of the Philippines and Slovakia, a representative from the Implementing Agency (UNIDO), one member from the EHF, a Civil Society representative, and one representative each from FAO, UNEP Chemicals, UNDP, the World Bank and the Basel Convention. The **Programme Coordinator (PC)** will serve on the PAC ex-officio, as well as the **National Project Manager (NPM)** who takes the responsibility of a Chief Technical Adviser (CTA). The PAC will meet not less than twice during Project implementation and will be called upon as necessary by the PC, in consultation with UNIDO, for policy advice and direction. The PAC may at anytime act to increase its membership, as it deems necessary. The PAC will be instrumental in assuring, among other things, necessary linkages between and among related projects both within and outside of the GEF.
49. There will also be a **Project Steering Committee (PSC)**. The PSC shall meet at least once annually, and may be convened as necessary at the call of the Programme Coordinator in consultation with UNIDO and the NPM. The PSC shall be initially comprised of eight (8) members. They will initially include a representative from the Government of the Philippines, a representative of the public sector consortium, a representative of the operating entity, one member from the Implementing Agency, one member from EHF and one member chosen to represent Civil Society interests in the Philippines. The PC and NPM will be *ex-officio* members of the PSC. The general function of the PSC will be to monitor the overall progress during the Project implementation, make recommendations regarding ways in which the Project could be more effectively implemented, identify lessons learned, problems encountered and generally assist the PC and NPM on any and all matters related to implementation of the demonstration activities in the Philippines. The PSC may also at anytime act to increase its membership, as it deems necessary.
50. Finally, there will be a **Programme and Project Technical Advisory Group (TAG)**. The TAG will also meet at least three (3) times during Project implementation. The TAG will undertake an advisory role in service of the work of the Programme and Project, most specifically as an advisory body to the PAC and the PSC. The TAG will meet at the call of the PC in consultation with UNIDO. Meetings may be held at specific locations or may be convened through teleconferencing as deemed appropriate and necessary. The TAG will serve as a primary vehicle for the continuation of non-combustion technology assessment, as a reviewer of the technical aspects of the Project during implementation, and in general as an Advisor to the Programme and Project on all matters of a scientific and technical nature. The TAG will be comprised of one member of the Implementing Agency, one member from the GEF STAP, one member from the EHF and scientific and technical expertise as deem necessary and representatives of DENR and the operating entity, drawing from resources such as the GEF STAP, FAO, UNEP, UNDP and the World Bank. One representative of each participating country of the Programme will also be member of the TAG.

ORGANIGRAM OF THE PROJECT



Abbreviations:

DENR-EMB – Department of Environment and Natural Resources – Environmental Management Bureau

EHF – Environmental Health Fund

GEF – Global Environment Facility

NGO – Non-governmental Organizations

PAC – Programme Advisory Committee

PNOC-PAFC – Philippine National Oil Corporation
Philippine Alternative Fuel Corporation

PSP – Private Sector Partner

STAP – Scientific and Technical Advisory Panel

TAG – Technical Advisory Group

UNIDO – United Nations Industrial Development Organization

C.4 Expected Outcomes

- Outcome 1: Non-combustion technology selected and purchased through contractual arrangements
- Outcome 2: Site selected and Environmental Compliance Certificate issued
- Outcome 3: Equipment for PCBs disposal purchased and installed
- Outcome 4: Destruction facility in operation, targeted PCBs-containing equipment and wastes destroyed, systems monitored and evaluated as well as active public participation
- Outcome 5: Documented and disseminated lessons learned and adaptive management system in place

C.5 Outputs and Activities

Output/Activity	Description	Responsibility
Output 1	Establishment of the Project Co-ordination and Support Unit, technology selection process and contracting	
Activity 1.1	Recruit the Programme Coordinator (PC) (on a part-time basis) and the National Project Manager (NPM) and the administrative assistant.	UNIDO
Activity 1.2	Assure cross-GEF and other related Project coordination and communication including UNEP, the Secretariat of Stockholm Convention, the Secretariat of Basel Convention, FAO, WB-IFC, etc. (PC's responsibility).	UNIDO
Activity 1.3	Selection process, establishment and approval of procedures, TAG meeting, incorporation of the advice and proposals into criteria for selection of non-combustion technology reflecting POPs wastes and stockpiles in the Philippines.	UNIDO, DENR
Activity 1.4	Tender capital equipment through a transparent, two-step international tendering process in accordance with UNIDO Financial Rules and Regulations and Procurement Manual with the participation of the TAG with respect to technical issues.	UNIDO, DENR
Activity 1.5	Ensure necessary training of Project operational and managerial personnel and effective technology transfer to the Philippines.	UNIDO
Output 2	Effective, specific and documented actions taken to ensure technical and environmental standards	
Activity 2.1	Undertake activities necessary to meet Environmental Impact Assessment (EIA) requirements of the Philippines and reviewed by UNIDO as well as other legal and environmental compliance activities.	DENR, UNIDO
Activity 2.2	Prepare the site selected for deployment of the selected technology in the Petrochem Park in Bataan, Province including construction of the storage facility and that of the destruction unit, the provision of facility equipment and of utilities and feedstock chemicals required for the uninterrupted operation of the chemical reactor.	PNOC/PAFC, DENR
Output 3	Effective, specific and documented actions taken to ensure purchase and installation of the non-combustion unit	
Activity 3.1	Design, construction and test operation of the destruction unit as well as site supervision in the Philippines	UNIDO, PNOC/PAFC

Output/Activity	Description	Responsibility
Activity 3.2	PNOC/PAFC, as the operating entity, provides the managerial structure, labor force and make available and ensure the continuous supply of PCBs-containing equipment and wastes, etc. as well as the necessary processing chemicals as raw materials to enable destruction of the targeted wastes and associated waste matrices in the demonstration area in the Petrochem Park in Bataan province (Annex 8).	PNOC/PAFC
Activity 3.3	Project Management Supervision (Monitoring) during technology transfer to the Philippines including site preparation (construction) and performance tests (with the required chemical analytical monitoring, sampling and testing).	UNIDO, DENR, PNOC/PAFC
Activity 3.4	Finalize Capital Equipment Transfer arrangements taking into account the final ownership of the hardware and technology will, to the extent possible, benefit continuous PCBs and other POPs disposal and the destruction of non-metallic toxic substances and various possible arrangements between the Government and the operating entity involved, such as exploring different incentives for further investment, etc.	UNIDO, DENR
Output 4	Monitoring and evaluation (M&E) of PCBs-containing equipment and wastes destruction of 1,500 tonnes in 2 years of operation, monitoring of compliance with technical and environmental standards as well as active public participation	
Activity 4.1	Develop environmental monitoring protocols including chemical analytical monitoring and a project evaluation framework and perform environmental monitoring throughout the project life.	UNIDO
Activity 4.2	Ensure requisite project M&E (in line with GEF and UNIDO rules and regulations for M&E and in consultation with stakeholders) during destruction of the targeted wastes and associated waste matrices in the demonstration area.	UNIDO
Activity 4.3	Assure continuing Civil Society involvement in the Philippines, including ensuring Civil Society participation in project M&E.	EHF, UNIDO, DENR
Output 5	Recruit additional donors to strengthen co-finance participation both from public and private sectors within the Programme, dissemination of results at national and international level	
Activity 5.1	Further develop public/private partnership for the recruitment of additional donor co-finance for the Programme.	UNIDO, DENR
Activity 5.2	Plan and host at least two (2) meetings of the Programme Advisory Committee (PAC), three (3) meetings of the Project Steering Committee; and three (3) meetings of the Programme and Project Technical Advisory Group (TAG). The agenda and the participation of these meetings will be circulated well ahead in time. In addition to the managerial issues related to the programme and project, these meetings will keep taking stock of the available information on innovative and cost-effective technologies and practices. Among others, the STAP activities on non-combustion technologies for the destruction of POPs stockpiles and wastes (GEF/C.23/Inf.19) and the results of the UNEP Chemicals PCB consultation meeting held in June 2004 and November 2005 will be followed up. The BAT/BEP guidelines and guidance documents being prepared by the BAT/BEP Expert Group will also be taken into account and the BAT/BEP process will be followed up.	UNIDO

Output/Activity	Description	Responsibility
Activity 5.3	Continue assessment of additional and emerging technologies that meet the project selection criteria. To achieve this task develop close coordination and cooperation with STAP, UNEP, the Secretariats of Basel and Stockholm Conventions, the BAT/BEP Expert Group and industry (PC responsibility).	UNIDO
Activity 5.4	Prepare and distribute Project Annual reports and Final Reports on project activities to Stockholm Convention Parties and signatory countries and to other interested parties such as IGOs and NGOs directly and by request. Materials to include, <i>inter alia</i> , specific global evaluation of barriers that impede the further utilization of appropriate, non-combustion technologies; a full report and an evaluation of all project related costs; performance and operating data; environmental impacts assessment; safety issues; a final evaluation of civil society input and participation; commercial considerations; the details of any special problems encountered; and specific recommendations on ways the outcomes of the project can be replicated globally (PC responsibility).	UNIDO
Activity 5.5	Assure senior level project representation at Stockholm Convention related meetings and other meetings as appropriate and assure effective liaison with related POPs projects such as the Africa Stockpiles Programme and the World Bank PCB management programmes and projects (PC responsibility).	DENR
Activity 5.6	Create and maintain a dedicated Project Website.	UNIDO
Activity 5.7	Conduct independent Terminal Project Evaluation after the project closure.	UNIDO

C.6 Technology Selection Process

51. The GEF approved Project Preparation documents defined criteria to be met as a means of initially screening the range of currently available Non-combustion technologies. The criteria employed during Preparation included limiting consideration of technologies to those that:
- *Operate in systems that are essentially closed. This means that uncontrolled releases of POPs and other substances of concern can be avoided and all residues from the destruction process (gaseous, solid and/or liquid) can be contained, analyzed and, if necessary, further processed prior to release. It also means that the technology can avoid the periodic "upsets" that plague incinerators and other open destruction processes; and*
 - *Can achieve total destruction efficiencies (DEs) for POPs and other substances of concern that approach 100%. This means that they not only effectively eliminate gaseous, air-emissions of POPs and other toxic pollutants of concern but they also effectively eliminate releases of these pollutants as solid wastes and as liquid wastes.*
52. The Technical Advisory Group (TAG) of the Project interpreted these requirements as necessitating consideration of only those technologies that were "commercially available" to mean that the technology had already been successfully operated at a full scale, that is in a commercial or other institutional setting. The TAG also concluded that the technology selected should come with the assurance that the vendor or vendors could provide the "know-how" and support needed to successfully set up and operate the technology under circumstances similar to those that would be identified in the participating countries.
53. On the basis of application of the above criteria and the TAG amplification of those criteria, three technologies were identified for further consideration. These included:
- Gas Phase Chemical Reduction (GPCR);

- Base Catalyzed Dechlorination that is currently referred to as Base Catalyzed Decomposition (BCD); and
- Sodium Reduction Process.

The reports of the TAG meetings appear in this document as Annex 5.

54. At this point in the technology selection process the final choice of the appropriate technology would be driven by the nature of the stockpile to be addressed in relation to the comparative advantage of the three technologies identified by the TAG as meeting Project Selection Criteria. Furthermore, based on current technological achievements, the selected technology should have demonstrated Destruction Efficiency of at least 99.9999% for PCB waste matrices of the type found in the Philippines.
55. It is important to note that each additional country participating in the overall Programme (China, and a yet to be designated African country) will undergo separate assessments similar to that undertaken to deploy the most appropriate technology to address the targeted PCB stockpile in Philippines. Ongoing development of the Programme will be driven by the nature of the stockpiles to be addressed in these additional countries, a continuing review of existing and emerging Non-combustion technologies that meet Programme and Project selection criteria, and consultations with the participating countries and other appropriate and necessary interests in the private and public sector. Toward this end, Programme/Project resources have been provided to ensure the continuation of the technology assessment process and will be one of the specific and ongoing responsibilities of the TAG.

C.7 Project Indicators, Risks and Assumptions

56. The four principal Risks that need to be taken into account for this Programme and Project include:
 - the possibility that the non-combustion technology will not perform consistent with its design specifications and expectations;
 - the Programme and Project will not be sustainable for financial and other reasons beyond the life of the GEF intervention;
 - the possibility of inadequate or ineffective Stakeholder participation; and
 - the possibility of a negative environmental impact assessment.
57. One of the Technology Selection Criteria applied during preparation was that only those Non-combustion alternative technologies that had been demonstrated to deliver high DE should be considered and they should be commercially available. It was recognized that for each technology different support to customers should be offered. It is evident that with inadequate technology vendor support the destruction unit could fail to reach its projected parameters. Given the broad range of documentation available on the performance of each short-listed technology, the risk that the technology will perform at less than its designed capacity and quality is seen as moderate.
58. A more significant concern is the issue of sustainability. The sustainability is discussed in paragraphs 57 to 61 and concludes that the risk of the Project of not being sustainable is seen as low.
59. The financial sustainability of the project rests with the assumption that the destruction unit will be able to operate competitively in the market with alternate destruction technologies including export for incineration beyond the life of the project. The Government has made a firm commitment not to license incineration facilities within the Philippines. The projected cost to be charged to waste owners for PCB destruction is expected to be in the range of US\$ 3.5 to US\$ 5 per kg. Waste owners in the Philippines have recently paid an average of US\$ 5,000 per tonne or more for PCB destruction through export for incineration. Therefore, as long as the destruction cost offered by the non-combustion unit remains lower than the export alternative, waste owners will continue to utilize the facility and thus ensure its long-term financial sustainability. A business plan to be elaborated at the end of the project demonstration phase

will correctly estimate the financial performance and the cost-effectiveness of the unit. The risk that the cost charged to the waste owners will be higher than the cost of export for incineration is considered low based on expert estimates on operating costs and the fact that the most cost effective non-combustion technology in the Philippine context meeting project selection criteria will be deployed.

60. The STAP Review of the Programme pointed out the possibility that the individual country Projects could be jeopardized by a negative environmental impact assessment. This is a valid concern and one that has been widely discussed during project preparation. The technology that is to be deployed and the performance of which will be the core of the environmental impact assessment must operate essentially in a closed system. The risk, therefore, of a negative EIA is seen as extremely low.

C.8 Expected Global, National and Local Benefits

61. Persistent Organic Pollutants (POPs) can injure human health and ecosystems at locations nearby the site from which they escape into the environment and also at very far distant from that site and can impact adversely on wildlife, aquatic and marine life, domestic animals and humans. Because of their unique properties, POPs do not respect national boundaries, and therefore pose a special kind of challenge that makes it impossible for any one-nation acting alone to remedy the problems. The implementation of cost-effective and clean, environmentally sound technologies, to be demonstrated in this Project for the destruction of obsolete wastes of PCBs and materials containing other POPs would, if replicated, support environmentally sustainable economic and industrial development in many regions particularly in countries with developing economies and economies in transition. To achieve this global benefit the EIA should have a crucial and guiding role throughout the project life.
62. The rationale of the Stockholm Convention is the long-range transport of PCBs and other POPs. The most important long-range transport vector is air transport and subsequent deposition at far distant locations and upward movement through the food chain.
63. POPs routinely escape from storage sites and from contaminated locations into the wider environment by volatilization, by ground and surface water run-off and by other means. By providing the framework for the destruction and cleanup of obsolete pesticides and hazardous industrial chemicals, the project will therefore contribute in preventing future contamination and threats to the quality of the global hydrological cycle. PCBs have contaminated local rivers both in Slovakia and the Philippines, and by addressing the PCB wastes issue in each of these countries, and the additional two countries that will comprise the Programme, water quality that has suffered from PCB leakage and dumping will improve as a result of this Programme and Project intervention.
64. The Stockholm Convention requires appropriate disposal of POPs wastes (Article 6; 1; (d) (ii)); and it calls on the CoP (Article 6; 2; (b)) to "*Determine what they consider to be the methods that constitute environmentally sound disposal...*" This demonstration Project is designed to produce information and data that will be valuable to Convention Parties as they determine their own strategies for POPs disposal. It will also provide information and data beneficial to the CoP in carrying out its mandate to determine what methods constitutes "environmentally sound" disposal.
65. Civil Society involvement was a hallmark of Preparation Activity. Repeated consultations with the NGO community have occurred in the Philippines. NGOs participated in meetings of the Technical Working Group set up by the DENR to advise the Government on the CCO. In this context, the same group received briefings and provided inputs to the Project design and strategy including the issue of non-combustion technologies. The NGO community was also an active participant in the TAG meeting held in Manila, the Philippines, in September 2003.
66. Even more extensive Civil Society involvement is planned during implementation of this proposed project. There will be substantial and ongoing country-based Civil Society participation in the Philippines, including arrangements to include elements of Civil Society in project monitoring and evaluation of results. The project makes explicit provision for continuing

regional Civil Society involvement in both the work of the Project and the overall Programme. Further, the Project includes provision for the sponsorship of two regional workshops for African, Asian and Latin American participants, with specific reference to LDCs to disseminate information/results on non-combustion technologies and destruction activities to date and project lessons learned. Lastly, specific provision will be made for site visits to the demonstration site in Philippines by elements of Civil Society, including representatives of governments from countries of the region and in other global regions, on an ongoing basis. This will not only strengthen the Civil Society participation in the Programme and Project but also be beneficial to enhancing replicability and sustainability at regional and global levels (see Outcome 4 and its related Activities).

67. Discussions under both Stockholm and Basel Conventions point to the desirability of exploring regional solutions to the disposal of PCB wastes in Asia and the Pacific was undertaken during Preparation. As a first step in this direction, the project will develop a close coordination and cooperation with Swiss Government funded and UNIDO executed second phase of the Cleaner Production Programme aiming at destruction of POPs stockpiles in Vietnam and other projects in the region such as the WB PCBs project in Vietnam.

C.9 Country Ownership: Country Eligibility and Country Drivenness

68. Eligible under paragraph 9 (a) of the GEF Instrument. The Philippines has ratified the Stockholm Convention on February 2, 2004 by the Senate Resolution No. 106.
69. The Department of Environment and Natural Resources (DENR) has prepared a specific regulation, Chemical Control Order, which specifically deals with PCBs stockpiles, equipment and wastes handling and management. This legislation foresees the elimination of PCBs wastes and PCBs-containing equipment by 2014. Assuming this legislation is enforced effectively, and provided illegal traffic and reuse can be prevented, all storage sites identified and all PCBs-containing equipment either cleaned and retrofitted or replaced, elimination of the entire stock of PCBs-containing equipment and disposal of all PCBs wastes in the Philippines will have been achieved. The present project aims to develop a model that would assist other countries to come as close as possible to that ultimate target, thus avoiding the need for follow-on projects and recurrent expenditures.
70. The Philippines have submitted its National Implementation Plan (NIP) for the Stockholm Convention. PCBs are stated as priority type of POPs wastes in the country. No other POPs chemical was identified to be present in the country in amounts similar to PCBs and PCBs-containing equipment and wastes.

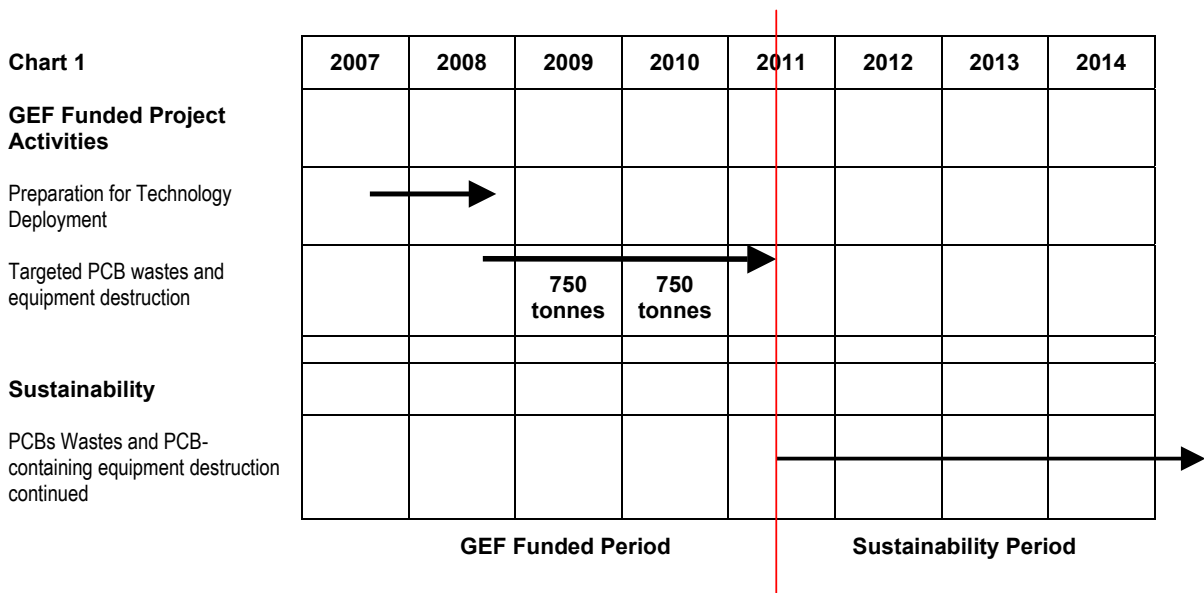
C.10 Sustainability

71. Project sustainability will be assured by stakeholders commitment and through the use of:
- The creation of Partnerships between and among the national government, the state owned entities, the private sector and Civil Society;
 - Significant Private Sector Investment;
 - Country driven framework for a legislative and regulatory regime consistent with the provisions of the Stockholm Convention and the Basel Convention;
 - Strong Civil Society participation and advocacy at national, regional and global levels;
 - Strong linkages with GEF and other related Stockholm Convention Projects and activities such as the Africa Stockpiles Programme (ASP), Enabling Activities (EA) at national, regional and global levels.
72. The Project delineates clearly the strong level of *Partnership* between the Government of the Philippines, the private and public sectors as well as the Civil Society. Strong evidence of this can be found in all Project Outcomes. The extent and significance of *Private Sector Investment* will be further described in the Financial Sustainability segment below.

73. The Project makes generous provision for strong, continuing Civil Society participation in Project implementation activities and builds upon the strong support for the Programme and the Project that was created during preparation. Evidence of the continuing commitment to strong *Civil Society Participation and Advocacy* in Project activities, an essential ingredient to strengthening community level support and thus sustainability for the objectives of the Programme and the Project, can be found throughout the Activities in Outcome 4. Strong linkages to other projects will ensure best efforts to generate replicability of project results in other countries. The Project Brief for the ASP approved in 2002 makes repeated references to the need to take into account results of the non-combustion demonstration Programme and Programme management will ensure that these linkages will be established and nurtured. Evidence to support the *Financial Sustainability* of the Project will be expanded in the Financial Sustainability section below.

Financial Sustainability

74. In addition to the GEF grant for the deployment of non-combustion capital equipment to the Philippines, the Government in partnership with the PNOC/PAFC, the operating entity, will commit US\$ 6.9 million to the designated targeted stockpile of PCBs-containing equipment and the associated waste matrices in the Philippines. The Government has already confirmed the co-financing of US\$ 500,000 to be provided in kind to facilitate various activities of the project. The operating entity has committed US\$ 3.9 million from its own resources (see Annex 13). The operating entity will invite other private sector entities at the time of the full project implementation for services related to identification, collection, interim storage, transport and appropriate handling of PCB wastes at the PCB owners place. The private sector entity will be required to meet all operating costs and recover its investment through the business operations. The owners of the PCB wastes and PCBs-containing equipment (most importantly Meralco, a private and TransCo and NAPOCOR, public sector entities) will pay an estimated services charge of about US\$ 2.5 million. The business plan (Annex 11) will be updated for this purpose after the technology has been selected and the private and public sector entities identified. Below is an indicative Chart of the timeframes how the selected technology will likely be deployed in the Philippines during and beyond the life of the demonstration project. The Chart shows projected destruction of PCBs oil and synthetic oil contaminated by PCBs, which roughly represent 30% of total weight of PCBs stockpile identified up to date. Approximately 1,500 tonnes of contaminated PCB equipment and wastes (500 tonnes PCB oil) will be destroyed during 2 years of the operation in terms of the project period. Based on the PCBs inventory presented in the NIP this amount is immediately available. Projection of the destruction is done for years 2008 – 2014. Year 2014 is the deadline for use and storage of PCBs equipment and wastes in the Philippines, as stated in the CCO. The proposed PCBs oil destruction capacity of the unit is in the range of 250 to 300 tonnes per year, which represent a yearly functional capacity to be a minimum of 750 tonnes of PCBs-containing equipment and wastes.



75. The currently known PCB inventories reported in the NIP of the Stockholm Convention dated January 2006 include 6,879 tonnes of PCB equipment and wastes comprising about 2,400 tonnes of PCBs oil. The PCBs inventory in the Philippines has been changed during the preparatory phases of the subject project. It is a reasonable fact that can be experienced in any other country during the preparation of their inventories. An increasing PCBs inventory has also been experienced in Slovakia. The original concept was that the demonstration project should destroy at least 1,000 tonnes of PCB-contaminated oil from transformers. However, based on the early experiences gained in Slovakia, financial sustainability of the operations in the demonstration project can be only achieved if the total existing PCBs stockpile would be eliminated. In light of this the total tonnage to be destroyed during demonstration phase is 1,500 tonnes. After the destruction of 1,500 tonnes covered by the project demonstration phase, data and information obtained would make it possible to correctly estimate the destruction costs and consequently the cost-effectiveness if the entire inventory of PCBs-containing equipment and wastes are destroyed. The implication is that there shall be guarantees that transparent M&E goes on at least by 2014. In addition, the potential of diffusing the technology in the region provides an additional positive element to the cost-effectiveness of the project and lowering the risk of GEF grant financing. The baseline scenario is clarified to include some 800 tonnes of PCBs equipment in the four-year demonstration phase as an average of 200 tonnes are exported each year.

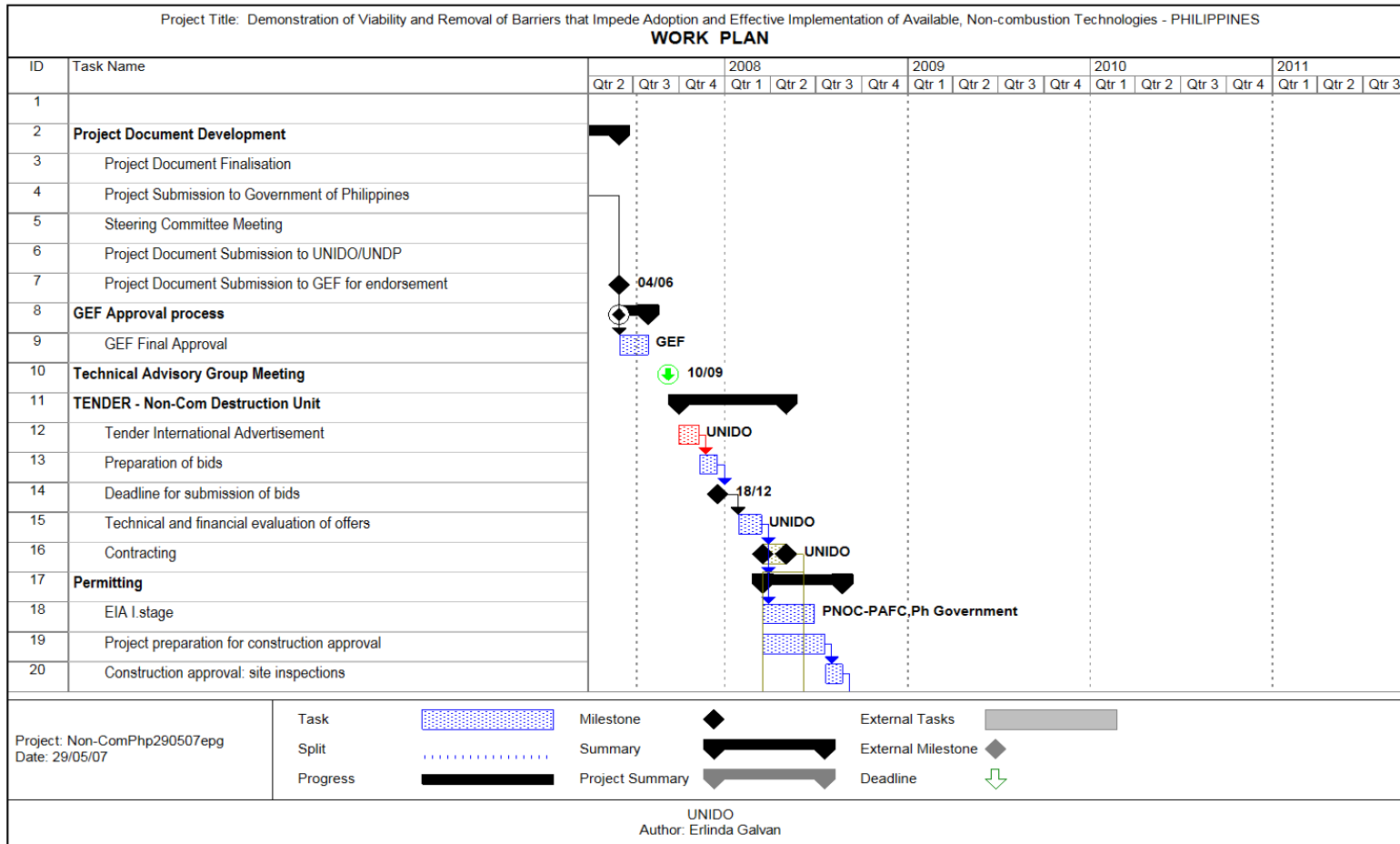
Cost-effectiveness

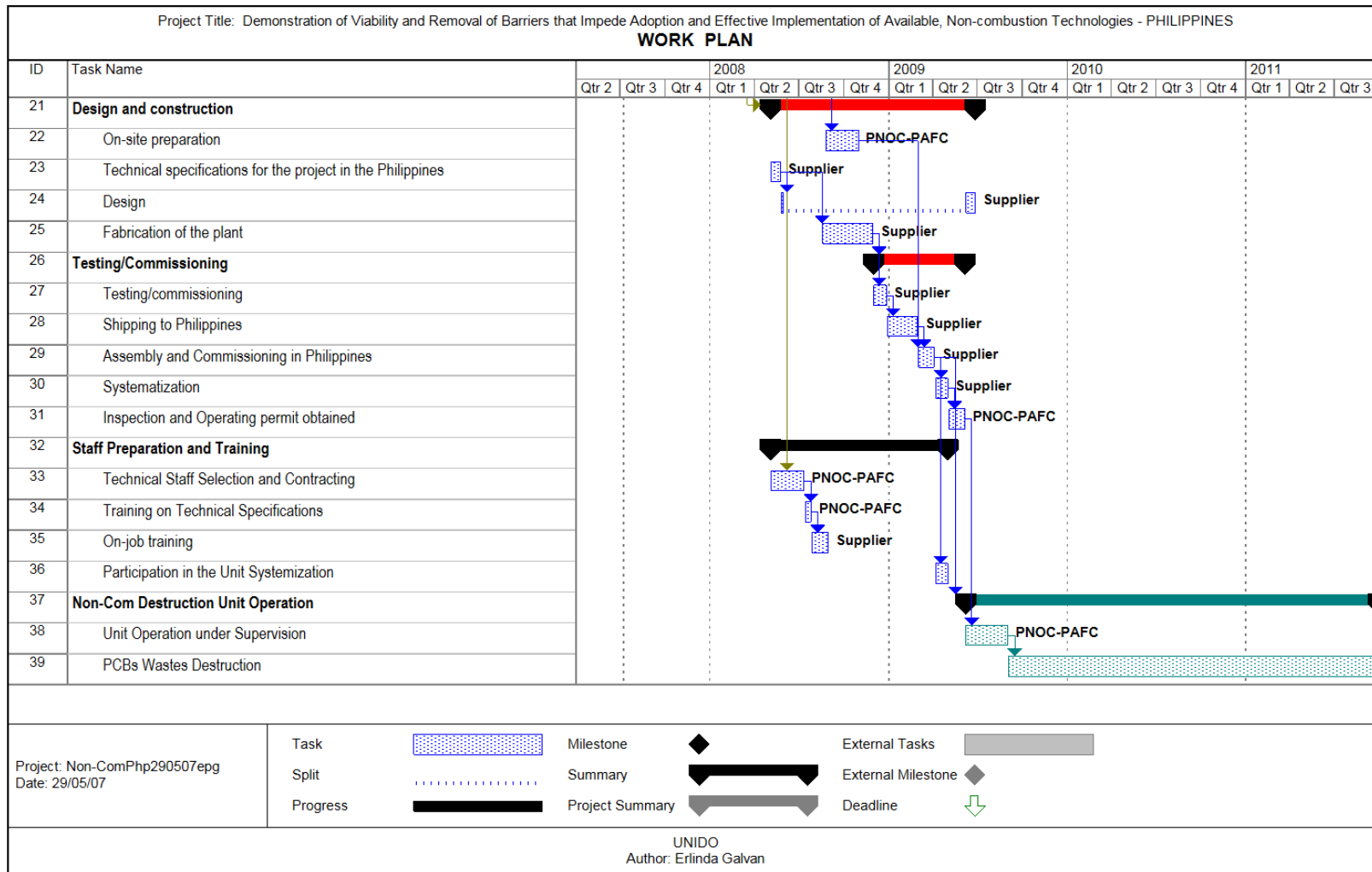
76. The cost of PCB-containing equipment and waste destruction per tonne should be reasonable under current market conditions and have decided that the potential for mid and long term, profit-making sustainability is real and worth the risk they are undertaking by way of financial commitment of the private partners. In previous discussions with PCB exporters, it has been consistently mentioned that the cost of exporting PCBs and PCB equipment ranges from US\$5-10/kg. In the financial analysis the lower figure of US\$5/kg was used. It should also be recalled that this project was initially proposed as a barriers reduction project on the understanding that project criteria would lead to the selection of newer technologies that are commercially available and have substantial operating experience, but may not have the long years of operating experience needed for their full economic optimization. While the STAP report recommends there should be investments made in emerging non-combustion technologies, newer technologies may additionally benefit from barriers reduction assistance before they are capable of fully competing, head-on, with highly capitalized and very mature older technologies such as waste incineration (which themselves were often highly subsidized in an earlier period). As the break-even point in the first year of the operation and the internal rate of return is 25%, it confirms that the socio-economic benefits gained through this project are high. The business plan for the Philippines project does make good business sense and is responsive to the actual market conditions in the country.
77. At the end of the demonstration project, data and information obtained would make it possible to project the destruction costs at any given time to achieve long-term sustainability. While the exact nature of the continued use of the technology cannot be fully determined at this time, it is clear that it will be productively deployed for many years beyond the GEF demonstration phase.

C.11 Replicability

78. The Programme will establish linkages with on-going GEF funded projects including Enabling Activities in the participating countries, the Africa Stockpile Programme and the Global NGO Capacity Building Project "Fostering active and effective Civil Society participation in the preparations for implementation of the Stockholm Convention" that is being implemented by UNEP and executed by UNIDO. The Programme has also been extensively reported in the STAP technical workshop held on October 2003 and during the deliberations of the BAT/BEP Expert Group of the Inter-Governmental Negotiating Committee of the Stockholm Convention. Deployment of the non-combustion technology in different country and regional settings will make possible linkages with all participating countries and eventually globally through feedback and reporting to the CoP of the Stockholm Convention.

C.12 Timelines of Project Activities





SECTION D. INPUTS**D.1 Counterpart Inputs**

GEF (cash) US\$ 4,108,500

Co-financing (see table below):

Co-financing Entity	Activity	Cash (US\$)	In-kind (US\$)
PAFC, the operating entity	Establish facilities with logistics, storage, utilities, facility equipment, safety measures to house the hardware of the PCB destruction unit and finance part of the operational expenses of the PCB destruction unit including chemical analytical monitoring	3,900,000	
Private sector	Pay for environmentally safe transport and storage of PCB-containing equipment and wastes as well as final disposal/destruction of PCBs	2,512,380	
DENR (Government)	Environmental Impact Assessment, M&E of the Code of Practice, M&E of the project implementation, Participating project activities (meetings, workshops, etc.)		500,000
NGO (EHF)	Advise and guide local NGO activities, participation in all NGO activities related to the project		100,000
	TOTAL	6,412,380	600,000

D.2 UNIDO Inputs (in kind) US\$ 650,000

UNIDO's in-kind contribution in the amount of US\$ 650,000 for the 4-year duration of the project consists of managerial and technical oversight and supervision on project implementation, M&E project implementation and other costs of one professional and one general staff devoting 50% of their time (a total of 24 work-months) to this project (the other 50% to Slovakia non-combustion project), over and above and in addition to supports provided under the agency fee received.

SECTION E. BUDGET

E.1 Project Budget (GEF only) in US\$

Outcome/ Activity	Budget Line	Description	2007		2008		2009		2010		2011		TOTAL	
			\$	w/m	\$	w/m	\$	w/m	\$	w/m	\$	w/m	\$	w/m
Outcome 1: Selection of Technology and Contracting	11-01	Programme Coordinator (part time)					36,000	6.0	36,000	6.0			72,000	12.0
	13-00	Administrative support	3,600	6.0	7,200	12.0	7,200	12.0	7,200	12.0	3,600	6.0	28,800	48.0
	15-00	Project Travel (consultant/experts)	6,000		17,000								23,000	
	17-01	National Project Manager	12,000	6.0	24,000	12.0	24,000	12.0	24,000	12.0	12,000	6.0	96,000	48.0
	17-02	Assistant to Project Manager (part time)	4,500	3.0	9,000	6.0	9,000	6.0	9,000	6.0	4,500	3.0	36,000	24.0
	33-00	On-the-job/placement trainings			30,000								30,000	
	45-00	Equipment, vehicles and communications	10,000		30,000		20,000		10,000				70,000	
<i>Subtotal</i>			36,100	15.0	117,200	30.0	96,200	36.0	86,200	36.0	20,100	15.0	355,800	132.0
Outcome 2: Site Preparation and Environmental Compliance	11-50	International consultants	10,000	1.0	15,000	1.5	20,000	2.0					45,000	4.5
	15-00	Project Travel (consultant/experts)	5,000		8,500		7,500						21,000	
	17-50	National Consultants	2,500	1.0	7,500	3.0	7,500	3.0					17,500	7.0
	21-00	Subcontract	85,000		85,000								170,000	
<i>Subtotal</i>			102,500	2.0	116,000	4.5	35,000	5.0					253,500	11.5
Outcome 3: Purchase and Installation of equipment for PCBs disposal	11-50	International consultants	10,000	1.0	25,000	2.5	30,000	3.0	5,000	0.5			70,000	7.0
	15-00	Project Travel (consultant/experts)	5,000		10,000		5,000		5,000				25,000	
	17-50	National Consultants	5,000	2.0	20,000	8.0	25,000	10.0					50,000	20.0
	21-00	Subcontract			35,000		35,000						70,000	
	45-00	Equipment			1,656,000		552,000						2,208,000	
<i>Subtotal</i>			20,000	3.0	1,746,000	10.5	647,000	13.0	10,000	0.5			2,423,000	27.0

Outcome/ Activity	Budget Line	Description	2007		2008		2009		2010		2011		TOTAL	
			\$	w/m	\$	w/m	\$	w/m	\$	w/m	\$	w/m	\$	w/m
Outcome 4: Destruction facility in operation, PCBs destruction, Monitoring & evaluation and public involvement	11-50	International consultants	10,000	1.0	35,000	3.5	35,000	3.5	25,000	2.5	15,000	1.5	120,000	12.0
	15-00	Project Travel (consultant/experts)	3,000		3,000		3,000		3,000		3,000		15,000	
	17-50	National Consultants	12,500	5.0	25,000	10.0	25,000	10.0	25,000	10.0	7,500	3.0	95,000	38.0
	21-00	Subcontract	37,000		90,500		99,000		44,500				271,000	
<i>Subtotal</i>			<i>62,500</i>	<i>6.0</i>	<i>153,500</i>	<i>13.5</i>	<i>162,000</i>	<i>13.5</i>	<i>97,500</i>	<i>12.5</i>	<i>25,500</i>	<i>4.5</i>	<i>501,000</i>	<i>50.0</i>
Outcome 5: Lessons learning, dissemination and adaptive management system in place	11-50	International consultants			40,000	4.0	45,000	4.5	15,000	1.5	10,000	1.0	110,000	11.0
	15-00	Project Travel (consultant/experts)	2,000		5,000		5,000		5,000		3,000		20,000	
	17-50	National Consultants	20,000	8.0	25,000	10.0	20,000	8.0	20,000	8.0			85,000	34.0
	21-00	Subcontracts	23,000		15,000		7,500		7,500		15,500		68,500	
	33-00	On-the-job/placement trainings					30,000		30,000				60,000	
	35-00	Workshops/meetings (TAG/PSC/PAC)	20,000		50,000		40,000		30,000		21,700		161,700	
43-00	Rental of premises (Project Secretariat)	10,000		17,500		17,500		17,500		7,500		70,000		
<i>Subtotal</i>			<i>75,000</i>	<i>8.0</i>	<i>152,500</i>	<i>14.0</i>	<i>165,000</i>	<i>12.5</i>	<i>125,000</i>	<i>9.5</i>	<i>57,700</i>	<i>1.0</i>	<i>575,200</i>	<i>45.0</i>
TOTAL (Project Cost)			296,100	42.0	2,285,200	72.5	1,105,200	80.0	318,200	58.5	103,800	20.5	4,108,500	
AOS		Agency fee											382,000	
GRAND TOTAL (Project Cost incl. AOS)													4,490,500	

E.2 DETAILED CO-FINANCING BUDGET BY ACTIVITY (IN US\$)

Outcome	Activity	Amount in US\$				
		Republic of the Philippines	Public/private sector	NGO	UNIDO	TOTAL
Outcome 1: Non-combustion technology selection, purchase through contractual arrangements	1.1 Recruit the part-time Programme Coordinator, National Project Manager and administrative assistant					
	1.2 Assure cross-GEF and other related project coordination and communication including UNEP, UNDP, the Secretariat of the Stockholm Convention, the Secretariat of Basel Convention, FAO and WB-IFC)			10,000	80,000	90,000
	1.3 Selection process, establishment and approval of procedures, TAG meeting, incorporation of the advice and proposals into criteria for selection of non-combustion technology reflecting POPs wastes and stockpiles				80,000	80,000
	1.4 Tender capital equipment through a transparent, two-step international tendering process				50,000	50,000
	1.5 Ensure necessary training of project operational and managerial personnel and effective technology transfer to the Philippines	45,000		10,000	25,000	80,000
	Subtotal	45,000	0	20,000	235,000	300,000
Outcome 2: Site selected and Environmental Compliance Certificate issued	2.1 Undertake activities necessary to meet environmental impact assessment and other legal and environmental compliance activities	80,000	100,000	10,000	50,000	240,000
	2.2 Prepare the site selected for deployment of the selected technology including construction of the storage facility and that of the destruction unit, provision of facility equipment and utilities and feedstock chemicals required for the uninterrupted operation of the chemical reactor		4,312,380			4,312,380
	Subtotal	80,000	4,412,380	10,000	50,000	4,552,380
Outcome 3: Equipment for PCBs disposal purchased and installed	3.1 Design, construction and test operation of the destruction unit as well as site supervision	100,000		5,000	50,000	155,000
	3.2 Operating entity provides managerial structure, labor force and make available and ensure the continuous supply of PCBs-containing equipment and wastes as well as necessary processing chemicals a raw materials to enable destruction of the targeted wastes and associated waste matrices in the demonstration area		2,000,000			2,000,000

Outcome	Activity	Amount in US\$				
		Republic of the Philippines	Public/private sector	NGO	UNIDO	TOTAL
	3.3 Project Management Supervision (Monitoring) during technology transfer including site preparation (construction) and performance tests (with the required chemical analytical monitoring, sampling and testing)	30,000		10,000	80,000	120,000
	3.4 Finalize Capital Equipment transfer arrangements taking into account the final ownership of the hardware will, to the extent possible, benefit continuous PCBs and other POPs disposal and the destruction of non-metallic toxic substances, and technology and various possible arrangements between the government and the operating entity involved such as exploring different incentives for further investment.	5,000			30,000	35,000
	Subtotal	135,000	2,000,000	15,000	160,000	2,310,000
Outcome 4: Destruction facility in operation, targeted PCBs-containing equipment and wastes destroyed, system monitored as well as active public participation	4.1 Develop environmental monitoring protocols including chemical analytical monitoring and project evaluation framework and perform environmental monitoring throughout project life	50,000		5,000	20,000	75,000
	4.2 Ensure project M&E during destruction of the targeted wastes and associated waste matrices in the demonstration area	15,000		5,000	15,000	35,000
	4.3 Assure continuing Civil Society involvement in the project related activities in the country including Civil Society participation in project M&E	30,000		15,000	15,000	60,000
	Subtotal	95,000	0	25,000	50,000	170,000
Outcome 5: Lesson learning, Dissemination and Adaptive Management System in place	5.1 Further develop public/private partnership for the recruitment of additional donor co-finance for the Programme	45,000			30,000	75,000
	5.2 Plan and host at least 2 PAC meetings, 3 PSC meetings and 3 TAG meetings			5,000	20,000	25,000
	5.3 Continue assessment of additional and emerging technologies that meet project selection criteria	20,000		20,000	20,000	60,000
	5.4 Prepare and distribute project Annual and Final Reports on project activities	20,000		5,000	15,000	40,000

Outcome	Activity	Amount in US\$				
		Republic of the Philippines	Public/private sector	NGO	UNIDO	TOTAL
	5.5 Assure senior level project presentation at the Stockholm Convention related meetings and other meetings as appropriate and assure effective liaison with related POPs projects	30,000			30,000	60,000
	5.6 Create and maintain a dedicated Project Website	30,000			20,000	50,000
	5.7 Conduct independent Terminal Project Evaluation				20,000	20,000
	Subtotal	145,000	0	30,000	155,000	330,000
	GRAND TOTAL	500,000	6,412,380	100,000	650,000	7,662,380

SECTION F. MONITORING AND EVALUATION, REPORTING AND LESSONS LEARNED

79. The Project Steering Committee (PSC), which will meet at least once annually, will be responsible for the overall policy guidance of the Project. A detailed schedule of project reviews will be developed by the project management, in consultation with project implementation partners and representatives of the participating communities, during the early stages of project initiation, and incorporated in the Project Inception Report. Such a schedule will include methodologies and tentative timeframes for PSC meetings, and participatory Monitoring and Evaluation of the Project by the participating communities. The project will be subject to GEF Monitoring and Evaluation rules and practices.

F.1 Monitoring and Evaluation and Reporting

80. The project team will develop criteria for participatory monitoring of the project activities. Appropriate participatory mechanism and methodology for performance monitoring and evaluation will be established at the very outset of the project. Monitoring and Evaluation (M&E) activities will be based on the Logical Framework Matrix. The overall M&E format for the project will follow the instructions and guidelines of the GEF M&E Unit and will be laid out in detail at the Inception Workshop.
81. In accordance with the GEF requirements, Quarterly Progress Reports will also be provided during the course of the project to GEF. M&E Performance Indicators are defined in Annex 2.
82. In particular, the project team will be responsible for the preparation and submission of the following reports:

Project Inception Workshop Report (PIWR)

The inception report prepared by the project team will take place no later than three months after the project start-up. The report will include a detailed annual work plan with clear indicators and corresponding means of verification for the first year of the project, fine tuning of Terms of Reference (TOR) for project professionals, TOR for sub-contractual services, progress to date on project establishment and start up activities, amendments to project activities/approaches, if any. The report will be submitted to GEF.

Annual Project Report (APR)/Project Implementation Report (PIR)

APR/PIR in a prescribed format will be prepared and submitted annually by the project management as per guidelines set for the same. APR/PIR will inform the Tri Partite Review (TPR) at the annual Steering Committee meetings and should therefore be circulated to TPR/SC participants well in advance. Final APR/PIR will be submitted to GEF as per standard procedures.

83. Particular emphasis will be given to Civil Society participation in the technical and other aspects of Programme and Project M&E (see Activity 4.2). All stakeholders will be given access to the data on destruction efficiency (DE) that is collected in real time, and elements of Civil Society will be invited to directly observe the real time evaluation of DE as well as participate directly in the formulation of the planned development of the necessary monitoring protocols and evaluation framework (see Activity 4.1).
84. The independent mid-term Project Evaluation (which would occur after actual destruction activity has commenced) would focus on destruction performance and efficiency, and would emphasize identification for dissemination of lessons learned from Programme and Project experience to date, including lessons about project design, implementation and overall management both at the Project and Programme levels. The final evaluation would focus on similar issues but will give strong emphasis to the potential for Project impact beyond the initial set of demonstration countries. Recommendations for follow-up activities would be included in each of these review processes.
85. As important as the undertaking of effective and thorough M&E will be for the Programme and Project, the effective communication of the results of these activities is equally important. This

will be accomplished by making certain that ongoing M& E results are included on the agendas of planned workshops and also posted in a regular basis on the Programme and Project dedicated Website (see Activities 4.1 to 4.3 and 5.1 to 5.6).

86. After the project closure, an independent Terminal Project Evaluation will be conducted to assess project impacts and likelihood of their sustainability.

INDICATIVE MONITORING AND EVALUATION WORK PLAN AND CORRESPONDING BUDGET

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team Staff time</i>	Time frame
Inception Workshop (IW)	<ul style="list-style-type: none"> ▪ National Project Manager (NPM) ▪ UNIDO Project Manager (PM) 		Within first two months of project start up
Inception Report	<ul style="list-style-type: none"> ▪ Project Team ▪ UNIDO PM 	None	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	<ul style="list-style-type: none"> ▪ UNIDO PM will oversee the hiring of specific institutions and delegate responsibilities to relevant team members 	To be finalized in Inception Phase and Workshop. Indicative cost \$40,000	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	<ul style="list-style-type: none"> ▪ Oversight by NPM and UNIDO PM 	To be determined as part of the Annual Work Plan's preparation. Indicative cost \$40,000	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	<ul style="list-style-type: none"> ▪ Programme Coordinator 	None	Annually
Steering Committee Meetings	<ul style="list-style-type: none"> ▪ NPM ▪ UNIDO PM 	None	Following Project IW and subsequently at least once a year
Quarterly progress reports	<ul style="list-style-type: none"> ▪ UNIDO PM 	\$4,000 per year, a total of \$16,000	Every three months
Technical reports	<ul style="list-style-type: none"> ▪ Project team ▪ Hired consultants as needed 	None	To be determined by Project Team and UNIDO PM
Mid-term Review and External Evaluation	<ul style="list-style-type: none"> ▪ UNIDO PM and M&E Branch ▪ GEF M&E Unit ▪ External Consultants (i.e. evaluation team) 	\$8,000	At the mid-point of project implementation or after two years of the start of the project.
Terminal Project Evaluation and Report	<ul style="list-style-type: none"> ▪ Project team, ▪ UNIDO PM and M&E Branch ▪ GEF M&E Unit ▪ External Consultants (i.e. evaluation team) 	\$16,000	At the end of project implementation
Terminal Project Report	<ul style="list-style-type: none"> ▪ Programme Coordinator ▪ UNIDO-PM 	None	At least one month before the end of the project
Lessons learned	<ul style="list-style-type: none"> ▪ Project team 	\$12,000 (average \$3,000 per year)	Yearly
Audit	<ul style="list-style-type: none"> ▪ UNIDO-CO ▪ Project team 	\$8,000 (average \$2,000 per year)	Yearly
Visits to field sites (UNIDO staff travel costs to be charged to IA fees)	<ul style="list-style-type: none"> ▪ UNIDO PM ▪ Government representatives 	None	Yearly
TOTAL INDICATIVE COST <i>Excluding project team staff time and UNIDO staff and travel expenses</i>		US\$ 140,000	

F.2 Lessons Learned

87. Lessons learned will be derived from, and communicated as a result of, the comprehensive set of Activities described in Outcome 4. Within these Activities, a strong emphasis on the monitoring and evaluation of Project results, a national, regional, and global focus on Civil Society participation and involvement, and the communications vehicles necessary to disseminate lessons learned from the Project is found.

SECTION G. PRIOR OBLIGATIONS AND PREREQUISITES

88. The Project Document will be signed by UNIDO and the Government of the Republic of the Philippines (Department of Environment and Natural Resources). GEF assistance will be provided subject to UNIDO being satisfied that the obligations and pre-requisites listed below have been fulfilled or are likely to be fulfilled. When fulfillment of one or more of these prerequisites fails to materialize, UNIDO may, at its discretion, either suspend or terminate its assistance.

G.1 Prior to Project Effectiveness

89. Legally binding co-financing agreements are signed for the private/public sector participation in the project.

G.2 During project implementation

90. The owners of all the PCBs-containing equipment and wastes identified in the inventory shall make available to the project the wastes and pay commercially competitive rates for their destruction.

G.3 Within one year of start of project implementation

91. The Government of the Republic of the Philippines shall make firm arrangements through the issuance of a Memorandum of Agreement with the main PCB owners to dispose of the PCBs-containing equipment and wastes.

SECTION H. LEGAL CONTEXT

92. The project document shall be the instrument referred to the Standard Basic Agreement between the Government of the Republic of the Philippines and UNIDO. The project objectives shall be in line with the objectives of the Policies of the Government of the Republic of the Philippines.
93. The following types of revisions may be made to this Project Document with the signature of the Project Manager, provided he or she is assured that the other signatories of the Project Document have no objection to the changes as follows:
 - Revision in, or addition of, any of the annexes of the Project Document; and
 - Revisions that do not involve significant changes in the immediate subcomponents, objectives, outcomes or activities of the project, but are caused by rearrangement of the inputs already agreed to or by cost increases due to inflation.