



PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: FULL-SIZED PROJECT
THE GEF TRUST FUND

Submission Date: 09/14/2007

Re-submission Date:

PART I: PROJECT IDENTIFICATION

GEFSEC PROJECT ID¹: 2995

GEF AGENCY PROJECT ID: P100478

COUNTRY: Tunisia

PROJECT TITLE: Demonstrating and Promoting Best Techniques and Practices for Managing Healthcare Waste and PCBs

GEF AGENCY: World Bank

OTHER EXECUTING PARTNERS: *Agence Nationale de Gestion des Déchets (ANGED) and la Direction Générale de l'Environnement et de la Qualité de la Vie.*

GEF FOCAL AREA (S): Persistent Organic Pollutants (POPs)

GEF-4 STRATEGIC PROGRAM(S): SP 1, SP 2 & SP 3

NAME OF PARENT PROGRAM/UMBRELLA PROJECT:

INDICATIVE CALENDAR	
Milestones	Expected Dates
Work Program (for FSP)	November 2007
CEO Endorsement/Approval	August 2008
GEF Agency Approval	October 2008
Implementation Start	December 2008
Mid-term Review (if planned)	
Implementation Completion	June 2012

A. PROJECT FRAMEWORK (Expand table as necessary)

Project Objective: Development of sound and sustainable healthcare waste and PCB management programs that will reduce POPs releases, specifically those of PCDD/PCDF and PCBs.									
Project Components	Indicate whether investment /TA/ or STA**	Expected Outcomes	Expected Outputs	Indicative GEF Financing*		Indicative Co-financing*		Total (US\$ million)	
				(US\$ million)	%	(US\$ million)	%		
1. Strengthening the Legal and Institutional Framework for HCW and PCB management	TA	- Regulatory and institutional capacity for the management of PCBs developed - Institutional and regulatory frameworks for HCW management strengthened	- Review and revision of institutional framework for handling of special wastes - Training of government officials and other stakeholders on revised legal framework	0.3	50	0.3	50	0.6	
2. Training and Capacity Building for Environmentally Sound Management of HCW and PCBs	TA	- Capacity built at the national level on all levels of management of PCBs and HCW	- Training of government officials and other stakeholders on BAT/BEP for PCB - Technical staff hired - Training of staff at healthcare facilities and Gvt officials aimed at increasing the efficiency of HCWM - Development of waste minimization programs	0.7	41.2	1.0	58.8	1.7	
3. Investments in HCWM	Investment	-Operational and financial aspects of the HCWM strengthened in pilot cities - Private sector participation is increased in the	- Environmentally sound alternatives for treatment and disposal of HCW implemented in the 2 pilot cities of Greater Tunis and Medenine - Promotion of environmentally sound	2	50	2	50	4	

¹ Project ID number will be assigned initially by GEFSEC.

		provision of HCWM services - 15% of emissions from inadequate incinerators eliminated	treatment, destruction and disposal technologies - Public awareness campaign on HCWM launched					
		- Disposal system of solid wastes is improved in selected facilities		0	0	10	100	10
4. Disposal of PCB contaminated oils and decontamination of stocked equipment	Investment	All PCBs owned by government agencies have been phased out	- PCB oils owned by government agencies disposed - PCB equipment owned by government agencies taken off-line and decontaminated - Storage sites decontaminated - Training of government officials and other stakeholders on BAT/BEP PCB disposal	0.4	44.4	0.5	55.6	0.9
5. Implementation of management plan for PCB-contaminated equipment	Investment	- Management plan for the phased decommissioning and phase-out of on-line PCBs developed and operational - Private sector involvement increased	- Management plan finalized - Awareness campaign aimed at owners of PCB-containing equipment is launched - Decommissioning of publicly owned PCB equipment	1.7	45.9	2	54.1	3.7
6. Project Management Cost				0.4	25	1.2	75	1.6
Total project costs				5.5	25	17.0	75	22.5

* List the \$ by project components. The percentage is the share of GEF and Co-financing respectively to the total amount for the component.

** TA = Technical Assistance; STA = Scientific & technical analysis.

B. INDICATIVE FINANCING PLAN SUMMARY FOR THE PROJECT (\$)

	Project Preparation*	Project	Agency Fee	Total
GEF	340,000*	5,500,000	584,000	6,424,000
Co-financing	100,000	17,000,000		17,100,000
Total	440,000	22,500,000	550,000	23,424,000

* PPG funds were approved in 2006 (GEF-3). Funds are being used to carry-out a diagnostic of existing HCW and PCB management in Tunisia and to determine future steps for integrated and sustainable management of these wastes and phasing out of POPs.

C. INDICATIVE CO-FINANCING FOR THE PROJECT (including project preparation amount) BY SOURCE and BY NAME (in parenthesis) if available, (\$)

Sources of Co-financing	Type of Co-financing	Amount
Project Government Contribution	In cash	3,000,000
Project Government Contribution	In kind	2,000,000
GEF Agency(ies)	In cash	10,000,000*
Private Sector	In cash	2,000,000
Total co-financing		17,000,000

* This amount represents the contribution from the IBRD loan for the Sustainable Municipal Waste Management System to this project and will specifically support the disposal system of solid wastes in selected facilities.

PART II: PROJECT JUSTIFICATION

A. STATE THE ISSUE, HOW THE PROJECT SEEKS TO ADDRESS IT, AND THE EXPECTED GLOBAL ENVIRONMENTAL BENEFITS TO BE DELIVERED:

This project will address two major sources of POPs releases in Tunisia: 1) improper disposal of healthcare waste (HCW), the combustion of which is the second largest source of dioxin and furan emissions (PCDD/PCDF); and 2) disposal of PCB contaminated equipment and oils. The objective of the project is to promote sound management programs for these two specific waste streams, which will lead to a significant decrease of local POPs releases, and to a resulting reduction of global environmental and human health exposure to POPs. The project will tackle releases of POPs through the following initiatives:

1) Sound management of HCW – The overall performance of the existing healthcare waste management (HCWM) system in Tunisia has declined since its inception in 1992. Separation of waste at healthcare facilities is conducted at the larger hospitals, but tends not to be practiced in the smaller facilities. Collection and transport of waste from healthcare facilities to final disposal sites is currently not specialized, and HCW is typically mixed with general municipal waste. Incineration is currently the only available alternative for disposal of HCW other than burial. Operating incinerators do not have emissions control systems, and therefore they are significant sources of dioxin and furans. There is a major under-capacity for incineration at the national level, and therefore HCW that is not incinerated is landfilled, mixed with other municipal waste. There are only three sanitary landfills in the country and the rest of the disposal facilities mostly consist of controlled or open dumps. Conditions at these dumps often result in uncontrolled combustion of waste, and to the release of PCDD/PCDF.

The total generation of PCDD/PCDF in Tunisia reaches 209 g TEQ/year². The two largest sources of emissions are uncontrolled combustion of waste and incineration of HCW, amounting to 76% and 15% of the total, respectively. The project will focus in reducing these emissions through outputs highlighted in Section A above. This project has been designed in conjunction with a World Bank Solid Waste Management operation that aims at promoting adequate practices for the disposal of municipal solid waste and at rehabilitating existing dumps. Through targeted measures and by combining efforts with the World Bank operation, up to 91% of the PCDD/PCDF emissions in Tunisia will be addressed and reduced by this project.

2) PCB Management – The PCB inventory conducted under the NIP concluded that the number of PCB-contaminated transformers and condensers was 3,190 and 3,337, respectively. This includes both on and off-line equipment, owned by the national electricity company (*Société Tunisienne de l'Electricité et du Gaz*, STEG) and by other parties. It was estimated that approximately 1,376 tons of contaminated oils remain in the country, which will need to be destroyed. Subsequent analysis concluded that roughly 400 PCB transformers are owned by government agencies other than STEG, of which 210 are currently in service. The NIP also noted that sites where equipment and PCB oils have been stored for the past few decades are contaminated. Two storage sites in particular were highlighted by PPG activities, namely Naassen and Jradou, owned by STEG and the *Agence Nationale de Gestion des Déchets (ANGED)*, respectively.

The presence of PCB contaminated equipment and oils constitute a significant threat to humans and to the environment, aggravated by the current poor storage conditions. This project addresses these sources of PCBs through the outputs highlighted in Section A. The project aims at eliminating all PCB-contaminated oils and equipment owned by government agencies, and to take steps that will help the phaseout of PCBs owned by the private sector.

B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL PRIORITIES/PLANS:

Tunisia signed the Stockholm Convention on May 23, 2001 and subsequently ratified it on June 17, 2004. Upon ratification the government agreed to reduce its sources of POPs, and specifically to prepare action plans for the elimination of sources of dioxins and furans, and of PCBs. The government reiterated its commitment to reducing POPs emissions in its National Implementation Plan (NIP), completed in January 2007. Priority actions, as outlined in the NIP, include strengthening of regulatory and institutional frameworks for POPs management, reduction of emissions of dioxins and furans from combustion of HCW and accidental fires in

² Tunisia's National Implementation Plan, 2007

land fills, establishment of treatment and stocking stations for PCB contaminated equipments and the safe elimination of PCB wastes. All of these priority actions are being addressed by this project.

C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH [GEF STRATEGIES](#) AND STRATEGIC PROGRAMS:

The proposed project is consistent with the GEF Focal Area Strategy for Persistent Organic Pollutants and falls under the strategic programs 1, 2 and 3, which respectively aim at strengthening capacities for NIP development and implementation, partnering in investments for NIP implementation, and generating and disseminating knowledge to address future challenges in implementing the Stockholm Convention.

This project will support the government in implementing the NIP and thereby help Tunisia meet its obligations under the Stockholm Convention. Tunisia will receive support to strengthen the necessary regulatory and institutional frameworks to handle POPs and put in place effective and sustainable emission reduction measures. The GEF contribution is expected to leverage private and public investments to implement the NIP and more specifically in the phasing-out of POPs that is privately owned and in disseminating information and contributing to public awareness of health consequences of contact with POPs.

D. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

The government of Tunisia has recognized sound and sustainable management of solid wastes as a top priority and, since the year 2000, has designed and begun implementation of a national strategy. With the assistance of a US\$20 million loan from the World Bank, the government is carrying out the Sustainable Solid Waste Management program (SSWM) which includes measures such as the establishment institutional and regulatory framework to address solid waste management issues, investments in the solid waste sector, and promotion of private sector participation. The SSWM was prepared in cooperation with and is being executed by ANGED. The GEF project is being designed in the context of the SSWM program such that the sound management of HCW and PCBs is incorporated into the country's regulatory framework and mainstreamed into ANGED's operations.

The government has already demonstrated its commitment to address POPs through its involvement in the Africa Stockpiles Program (ASP). The ASP, also executed by ANGED, aims at eliminating publicly held obsolete pesticides, including POPs, and preventing their re-accumulation. A detailed inventory has been carried out, and the disposal process has started with the preparation of Country Environment Social Assessment, and the recruitment of an international disposal contractor. The development of a prevention strategy, in partnership with relevant administration, civil society and the private sector, is also underway. These experiences have strengthened Tunisia's POPs management capacity, and left ANGED well prepared for further disposal and prevention activities of other POPs, as well as to mainstream POPs management in country priorities. All opportunities to take advantage of capacity building activities on POPs that are being conducted under the ASP, and particularly those dealing with decontamination and disposal, are being built into the design of the PCB and HCW management programs.

E. DISCUSS THE VALUE-ADDED OF GEF INVOLVEMENT IN THE PROJECT DEMONSTRATED THROUGH [INCREMENTAL REASONING](#) :

Healthcare waste management - Under the business-as-usual scenario, the government will continue to apply its existing regulatory framework to the management of HCW. The quality of HCWM in Tunisia is not likely to improve unless mechanisms are put in place to make the various actors accountable for the services they provide. In particular, practices concerning HCW reduction and separation will prevail in their currently inefficient state. In the current scenario it is difficult to envision the emergence of specialized providers of healthcare waste services, since there are neither regulatory nor financial guarantees that would promote private sector participation. If separate handling of HCW is not guaranteed, increased emissions of PCDD/PCDF from uncontrolled burning at landfills will continue and may increase. Regulations are also insufficient in terms of the technological alternatives for treatment and final disposal of HCW, as incineration is currently the only disposal alternative. There are neither specific guidelines for incineration, nor air emission standards in Tunisia, and therefore no requirements for emission treatment and control. Incineration at healthcare facilities is therefore likely to continue to be a primary source of PCDD/PCDF emissions. In absence of other disposal options,

emissions of PCDD/PCDF are likely to increase in the future, as more facilities resort to incineration as a means of resolving their HCWM problems.

GEF's assistance will allow the government to address and eliminate two of its major sources PCDD/PCDF. The project will build capacity in various fronts including: a) *regulatory*, by strengthening existing regulation covering the handling and disposal of HCW, such that processes that lead to dioxin and furan emissions become illegal and can be penalized; b) *technological*, by providing training and later demonstrating BAT/BEP for management of HCW through pilot projects in the Greater Tunis area and in Medenine; and c) *institutional*, by helping to open markets and encouraging private sector involvement in the HCWM sector. A shift in service provision from public to private sector will ensure the improvement of the quality of service of all HCWM-related activities that will ultimately lead to a decrease in emissions of dioxins and furans.

PCB management - Under the business-as-usual scenario, no regulations are in place to implement a national phaseout of PCBs, in line with the targets of the Stockholm Convention. No capacity exists in the country that would permit evaluation of potential alternatives for the safe handling of PCB-containing equipment. Moreover, no resources are available for the adequate disposal of PCB-contaminated oils and electrical equipment that are currently held in government-owned storage points around the country. Unless appropriate containment procedures are put in place, PCB spills will continue to occur at these facilities, posing major threats to human health and the environment. Finally, under this baseline scenario, there is no motivation for the private sector to phase out or to adequately contain its PCB-contaminated equipment, further contributing to potential releases of POPs in the foreseeable future.

Under the alternative scenario, a four-pronged approach will eventually lead to the complete phaseout of PCBs owned by the public sector, and contribute to a gradual elimination of privately owned PCBs. This will reduce potential sources of PCBs in Tunisia and thus global threats of exposure. GEF resources will be used to: a) put in place an adequate regulatory framework that will allow controlling and ultimately eliminating the use of PCB-containing equipment; b) build capacity, both in the public and private sectors in the use of BAT/BEP for the management of PCBs; c) eliminate all stocks of PCBs and all publicly owned PCB-containing equipment; and d) develop a management plan for the decommissioning of privately owned PCB equipment. By providing training, showcasing alternatives for decommissioning and safeguarding equipment, and demonstrating the government's commitment to eliminating PCBs, this scenario presents a realistic context to engage the private sector in an approach to gradually phase out all PCB-contaminated equipment in Tunisia.

F. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED, AND IF POSSIBLE INCLUDING RISK MEASURES THAT WILL BE TAKEN:

The following risks have been identified:

1. *Anticipated reductions in PCDD/PCDF emissions do not materialize* - While it is clear that emissions of dioxin and furans from poor incineration practices will be eliminated with the closure of existing incinerators, additional emission reductions from poor HCWM practices will be more difficult to realize and particularly difficult to quantify. The fact that this project has been designed in conjunction with the World Bank's Sustainable Solid Waste Management project guarantees that the approach suggested for emissions reductions will not be proposed in a vacuum, and that it will be consistent with overall reforms put in place for the management of solid waste. The adequate management of **all** solid waste will ultimately guarantee that emissions from combustion of waste at landfills are eliminated.
2. *Private sector involvement in HCWM does not take place* - Participation of the private sector in the HCWM initiative will be critical to the long-term success of the project, and it might not automatically occur without strong government involvement. The project's first component will directly address revisions to the institutional and regulatory framework needed to develop a climate conducive to private sector participation. Moreover, the HCWM pilots have been designed to demonstrate the viability of private sector involvement. There is no upfront reason to believe that the privately operated and very lucrative business of HCWM cannot be started in Tunisia with adequate government support.
3. *Destruction of PCB oils and decommissioning of PCB-contaminated equipment cannot be completed* - The government is fully committed to its obligations under the Stockholm Convention, including the total phaseout of PCBs. To this end it is aware that motivating the private sector to cooperate in the phaseout

will be essential, since private owners hold the majority of the PCB-contaminated equipment. Demonstrating the viability and completing the decommissioning of publicly-owned equipment will be the first step in the process of bringing the private sector on board. Components 1 and 2 have also been designed to create the appropriate regulatory environment for and to decrease the costs of private sector involvement by creating local expertise for PCB management, respectively.

G. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT:

Feasibility studies that are currently underway (financed with PPG funds) are analyzing the most cost-effective HCWM alternative in two pilot cities, and the most cost effective commercial technology currently available for the disposal of PCB oils and management of contaminated equipment. Cost-effectiveness estimates will be provided at the time of project submission.

H. JUSTIFY THE COMPARATIVE ADVANTAGE OF GEF AGENCY:


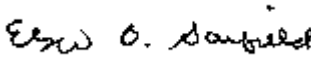
Consistent with comparative advantage matrix with significant cofinancing by an IBRD loan.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the [country endorsement letter\(s\)](#) or [regional endorsement letter\(s\)](#) with this template).

Dali Najeh Focal Point of GEF in Tunisia General Director of Environmental and Life Quality Ministry of Environment and Sustainable Development Centre Urbain Nord. Boulevard d la Terre. Tunis 1080 Tunisia TEL: 216 70 728 679 FAX: 216 70 728 595 E-mail: dgeqv@mineat.gov.tn , dali.najeh@agrinet.tn	Date: September 13, 2007
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B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation.	
Steve Gorman GEF Agency Coordinator 	Elsie B. Garfield Regional Coordinator Project Contact Person 
Date: <i>September 14th, 2007</i>	Tel. and Email: 1 (202) 473-5007 / Egarfield@worldbank.org